

JUNE
1953

THERE'S A PHILIPS VALVE FOR EVERY SOCKET

Amateur Radio

JOURNAL OF
THE WIRELESS
INSTITUTE OF
AUSTRALIA

For the Experimenter
and Radio Enthusiast



1/-

Registered at G.P.O., Melbourne, for
transmission by post as a periodical.

*Building
an
Amplifier?*

*then don't start
without these
SPECIAL VALVES*

There's a Philips valve for every socket of every transmitter or receiver. The valves shown on this page are a few from the complete range of Philips valves designed especially for Audio Amplifiers.

PHILIPS



PHILIPS EF37A

Pentode Amplifier with low hum and anti-microphonic construction.

Heater: 6.3v. at 0.2a.
Plate voltage: 250v. d.c.
Transconductance: 1800 umhos.

Stage gain as resistance-coupled Amplifier: 175.

Base: Octal.

PHILIPS EL34

Output pentode for heavy-duty work: 10-100 watts.

Heater: 6.3v. at 1.5a.

Power output: 11 watts (single valve) with 250v. plate voltage, 35 watts (two valves) Class AB with 375v. supply, 100 watts (two valves) Class B with 775v. supply.

Triode connected single valve: 6 watts, 375v. supply.

Base: Octal.

PHILIPS 6M5

Output pentode: 5-10 watts.

Heater: 6.3v. at 0.71a.

Power output: 4.9 watts (single valve) with 250v. plate voltage, 9.4 watts (two valves) Class AB with 250v. supply.

Base: Noval.

Philips Electrical Indust. Pty. Ltd.

Sydney, Melbourne, Brisbane, Adelaide, Perth



THE BEST BY TEST FOR HIGH GAIN
AND HIGH LEVEL AMPLIFICATION

"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

5A Melville Street, Hawthorn, Victoria

North Balwyn Tram Passes Corner, near Vogue Theatre.

Phone: Hawthorn 4465

Money Orders and Postal Notes payable North Hawthorn P.O. Packing Charge on all goods over 10 lbs. in weight, 5/- extra.

New Valves Just Arrived

834, R.C.A. £1	35T Eimac 50/-	954 American 12/6	EF50 12/6
6SG7 12/6		955 American 12/6	12K8 10/-

Tested Valves from Disposal Gear

1A3 .. 10/-	6AC7 .. 10/-	6G6 .. 10/-	6SH7 .. 5/-	7C5 .. 10/-	12SG7 .. 10/-	1629 .. 10/-
1A5 .. 10/-	6AG5 .. 15/-	6G6G .. 10/-	6SH7GT 4/-	7C7 .. 10/-	12SK7 .. 10/-	2051 .. 10/-
1G4 .. 7/6	6B4 .. 10/-	6H6 .. 5/-	6SL7 .. 15/-	7F7 .. 10/-	12SQ7 .. 10/-	7193 .. 5/-
1K5 .. 7/6	6BE6 .. 15/-	6J5GT .. 10/-	6SN7 .. 15/-	7G7 .. 10/-	12SR7 .. 10/-	9002 .. 10/-
1K7 .. 7/6	6C4 .. 12/6	6J6 .. 15/-	6SS7 .. 10/-	7N7 .. 10/-	14A7 .. 5/-	9003 .. 10/-
1L4 .. 10/-	6C5 .. 10/-	6K6 .. 10/-	6U5 .. 7/6	7W7 .. 10/-	807 .. 10/-	9004 .. 10/-
1R5 .. 10/-	6C6 .. 7/6	6KTG .. 7/6	6U7 .. 10/-	7Y4 .. 10/-	809 .. 50/-	EF50 .. 7/6
1S5 .. 10/-	6C8 .. 10/-	6L6G .. 10/-	6V6 .. 10/-	12A6 .. 10/-	813 .. 60/-	OAA .. 10/-
2A3 .. 10/-	6F5 .. 10/-	6L7 .. 10/-	6X5 .. 10/-	12AH7 .. 10/-	832 .. 50/-	TZ20 .. 40/-
2X2 .. 10/-	6F6 .. 10/-	6N7 .. 10/-	7A6 .. 10/-	12C8 .. 10/-	956 .. 10/-	VR105 .. 15/-
3A4 .. 10/-	6F8 .. 10/-	6N8 .. 15/-	7A8 .. 10/-	12J5 .. 10/-	1603 .. 10/-	VR150 .. 15/-
3Q5 .. 10/-		6R7 .. 10/-				VR65A .. 2/6

Command Transmitters, new condition. Freq. 4 to 5.3 Mc. complete with valves and crystal £7/10/-

AT5 Transmitter, complete with valves £8

AR8 Connecting Cables, 8-pin sockets 5/- each

American Radio Control Tuning Dials, contains one 0-5 Ma. Meter, Volume Control, Dial Light, Yaxley Switch and Phone Jack Postage Free. Price £1/5/-

Bendix Loop Antenna, 8 inch diameter, enclosed gear box. Condition new. Postage Free 10/- each

Magnavox Speaker Transformers, 10,000 and 4,000 Ohms. New condition 7/6 each

Single Shielded Hook-up Wire, new 8d. yard

Hammarlund BC191E Plug-in Coil Units, contains two variable condensers, coil formers, fixed condensers, etc. Complete £2/10/-, Less vernier dial, £2.

Six volt Baynet Type Dial Lamps 1/- each

EF50 Sockets, Ceramic 2/6 each

Loekal Sockets 1/6 each

Solor 28 pF. silver plated wide-spaced Condenser, 9/6

Co-ax Connectors male/female, small Pi type, new 2/6 pr.

New Meters—0-1 Ma. full scale, square type 27/6

New Meters—0-5 Ma. full scale, square type 27/6

New Meters—0-40, 0-120 Ma., separate connection, 27/6

New Meters—0-100 Ma. full scale, 2" mounting, 32/6

New Meters—0-150 Ma. full scale, square type 27/6

Command Receivers, 3 to 6 Mc., and 6 to 9 Mc. As new, less genemotor. Air tested £7/10/-

AR8 Receivers, condition as new £20

ZB2 Aircraft Radio, easily adaptable for 2 or 6 metre operation as converter, new £4/10/-

R1155A English Com. Receiver, nine valves, five bands, frequency range: 75 Kc. to 18 Mc., original condition. Less power supply £29/10/-

AR301 High Frequency Receiver, uses three 954s, one 955, six 6AC7 1F. stages at 30 Mc. Easily converted to 144 Mc. Complete, as new £9

G.E.C. American Receiver, six valves, four switched bands 200 Kc. to 1,500 Kc. Tube line-up: 12SK7 1st RF, 12K8 Mixer, two stages IF at 160 Kc. using 12SK7 IF Amps., 12SR7 1st Det. and BFO into 12A6 output valve, 24v. genemotor. Ideal for Q5'er £17/10/-

Signal Generator, home-built, vernier dial, no coil, chart, in steel cabinet, complete with AC power supply, £15

LARGE STOCK OF CRYSTALS AVAILABLE

1,000 Kc. Crystal mounted in case with 10-pin valve socket and 4-pin Continental power plug £2
Marker Crystals, 3.5 Mc., 5 Mc., and 10 Mc. Crystals ground to any frequency. Complete with holder, £2
Following is a list of Crystal Frequencies available for immediate delivery at £2 each—

2258 Kc.	6000 Kc.	7021.5 Kc.	7058.5 Kc.	8090 Kc.
2282 Kc.	6235 Kc.	7032 Kc.	7062 Kc.	8126 Kc.
3540 Kc.	7000 Kc.	7033 Kc.	7063 Kc.	8150 Kc.
3506 Kc.	7004 Kc.	7039 Kc.	7116 Kc.	8153.71 Kc.
3509.1 Kc.	7006.2 Kc.	7041 Kc.	7129 Kc.	8161.538 Kc.
3511.2 Kc.	7008.5 Kc.	7044 Kc.	7175 Kc.	8171.25 Kc.
3573 Kc.	7012 Kc.	7047 Kc.	7200 Kc.	8177 Kc.
3695 Kc.	7015 Kc.	7050 Kc.	8021.5 Kc.	8182.5 Kc.
5460 Kc.	7016 Kc.	7054 Kc.	8025 Kc.	8183.5 Kc.
5780 Kc.	7020 Kc.	7058 Kc.	8035 Kc.	8318.18 Kc.

WANTED TO BUY—RADIO PARTS, VALVES, TRANSFORMERS, RECEIVERS, TRANSMITTERS, ETC.

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
Melbourne, C.I.

EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

ADVERTISING REPRESENTATIVE:

BEATRICE TOUZEAU,
96 Collins St., Melbourne, C.I.
Telephones: MU 4977, Cent. 3581.

PRINTERS:

"RICHMOND CHRONICLE,"
Shakespeare St., Richmond, E.I.
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.I., on or before the 8th of each month.

Subscription rate in Australia is 12/- per annum, in advance (post paid) and A15/- in all other countries.

Wireless Institute of Australia
(Victorian Division) Rooms' Phone
Number is FJ 6997.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI. Intrastrat working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3073 and 7146 Kc., 31.018 and 145.25 Mc. Intrastrat working frequency 7125 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3550 and 14348 Kc., 3550 Kc. channel is used from 0915 hours to 1015 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available.

VK3WI: Sundays, 1000 hours EAST, on 7146 Kc. Frequency checks are given by VK3DW by arrangements only on the 7 and 14 Mc. bands.

VK3WI: Sundays, 0930 hours WEST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.3 Mc. No frequency checks are available.

EDITORIAL



Coronation of Queen Elizabeth II. of England



The 2nd June, 1953, is a date that will be recorded in the annals of history as depicting one of the most colorful, historical, and awe inspiring events of modern times—the Coronation of a Queen regnant—ELIZABETH II. OF ENGLAND.

This day is not only important to Her Majesty, but is also important to all her people wherever they may be situated throughout the British Commonwealth of Nations. Every man, woman and child will be with Her Majesty in spirit during the great ordeal of her Coronation, will

be seeking early news and pictures of this great occasion, and will be praying that God grant her the health, strength and fortitude to carry her through this ceremony and on through the years of her reign.

The members of the Wireless Institute of Australia in particular pay tribute to a gracious lady and profess their loyalty, fidelity and allegiance to Her Majesty Queen Elizabeth II. of England. May her reign be long and glorious.

FEDERAL EXECUTIVE.

THE CONTENTS . . .

Double Converting Disposals Receivers	2	Amateur Call Signs	10
Ross A. Hull Memorial V.h.f. Contest, 1953, Results	3	DX Notes by VKTRK	11
More Effective Utilisation of the Small Power Transformer	4	Prediction Chart for June	11
Fifty Megacycles and Above	9	Bring Your Regulations Handbook Up To Date	13
		Federal, QSL, and Divisional Notes	14
		Correspondence	20

Double Converting Disposals Receivers

The BC348 Receiver

BY F. O'DONNELL,† VK3ZU

VERY good results have been achieved by the double conversion of the BC348 (double ended series) at this station by a simple method, and so at the suggestion of several Hams, here is the conversion details.

The layout is not altered, the only major alteration being the replacement of the last three i.f. transformers (119, 120 and 122) with one of the 175 Kc. type.

The crystal filter is left intact and the first i.f. tube (6K7) is replaced by a converter type 6J8GA. The connection on the socket of this tube between suppressor and cathode (pins 5 and 6) is removed, leaving pins 5 and 6 vacant. Now the b.f.o. transformer (121) connections on pins 4 and 5 of the second i.f. tube 6K7 are disconnected and then connected to pins 5 and 6 of the new 6J8GA socket.

This transformer is now the oscillator coil of the new second converter and is then padded up to 740 Kc., making sure to connect the padder condensers (in addition to those originally installed) directly across the grid coil of the transformer. This can be done on the top of the transformer under the removable shield.

Output from the new converter is now 175 Kc. The last three i.f. transformers (119, 120, and 122) are now removed and replaced by 175 Kc. transformers. Aligning the 175 Kc. i.f.s and new converter stage is all that is now necessary.

The gain was found to be approximately the same as before the conversion, but the signal to noise ratio was improved. Thus we have a very selective receiver using the same number of tubes but now with one stage of 915 Kc. and two stages of 175 Kc.

A power supply was installed in the dynamotor well and selenium rectifiers used instead of a tube rectifier as heat generated was excessive when in a cabinet.

Numbers in brackets represent transformer numbers as per circuit in the manual. VK3ABP informed me that he has double converted a Command Receiver in the same manner and is more than pleased with the results. My thanks to VK3ABP for information and discussion on this type of receiver which eventually gave me the idea for this conversion which was so successful at this station.

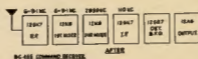
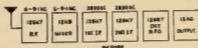
† Brook Street, Eura, Vic.

Command Receivers

BY K. R. POUNSETT,* VK3ABP

THERE are many Amateurs who own Command Receivers BC455 or BC454 and find them lacking in selectivity for use on our crowded bands. This especially applies to the BC455 (8-9.1 Mc.) covering the 40 metre band.

The writer has a BC455 which was intended for portable use, using phone and c.w., and very early it was found to be most inadequate, in particular for c.w. reception. A few hours' work, plus a couple of low frequency i.f. transformers and substitution of one tube, made this little receiver a very sensitive and selective piece of work. The modification to double conversion is very simple and will be quite evident if the "Before" and "After" block diagrams are studied.



To carry out the conversion, obtain a pair of low frequency i.f. transformers (175, 110 or 50 Kc.); the frequency can be your own choice depending on how much selectivity you require, and another 12K8 or similar converter tube. The second and third i.f. transformers are removed from their sockets and the sockets are removed by the "brute force" method from the receiver. The 2nd i.f. transformer is removed from its can and the pie winding (an r.f. choke) is removed from the former. In place of this pie, a coil of six turns is wound on the former as a tickler winding. This is the second oscillator coil for the 2nd converter tube. The small fixed condenser is retained for use across the oscillator coil.

The first i.f. tube socket is re-wired to become the 2nd converter socket. Reference to any tube manual will readily determine how this can be done. The new oscillator coil is mounted beneath the tube socket. This will necessitate moving the 15 uF. output cathode bypass condenser to another spot. It can be mounted in the position of the 3 henry audio choke (numbered 5634, and designated L15 in circuit diagram) which was removed from the writer's receiver as an a.c. power supply is used. If the original genomator supply is used, a 25 uF. 40 p.v. condenser may be substituted and located wherever there is room.

* 28 Lewisham Road, Windsor, S.I. Vic.

The 2nd oscillator coil is tuned by the original fixed condenser which has a capacity of 180 pF. and a 3-30 pF. trimmer. The 3-30 pF. trimmer is mounted near the coil on heavy gauge wire to keep the 2nd oscillator frequency stable. A hole must be drilled in the bottom plate to allow adjustment of the trimmer to set the 2nd oscillator frequency to 2830 Kc. minus the chosen 2nd i.f. The frequency can be set by using another communications receiver or a frequency meter.

The rest of the job is comparatively simple. Wire in the new low frequency i.f. transformers and drill holes in the bottom plate to allow adjustment of the tuning slugs. It was found that best results are obtained by aligning the various circuits with the bottom plate on.

The b.f.o. was left as it was and results are excellent. A VR105 was used to stabilise the voltage on the r.f. and mixers' screens and the b.f. oscillators and the b.f.o. This was found necessary to keep down drift which necessitated continued adjustment of the b.f.o. control.

This double conversion modification can be applied to most types of disposal receivers. The BC348 lending itself admirably. For information on the initial modifications to SCR274N Command Receivers, readers are referred to "QST" and "CQ" magazines. Queries regarding this equipment (and most airborne disposals equipment) may be referred to the writer on the air or by post.

The writer wishes to extend appreciation to VK3ZU for advice and suggestions given over the air and to VK3ARO for his practical aid.



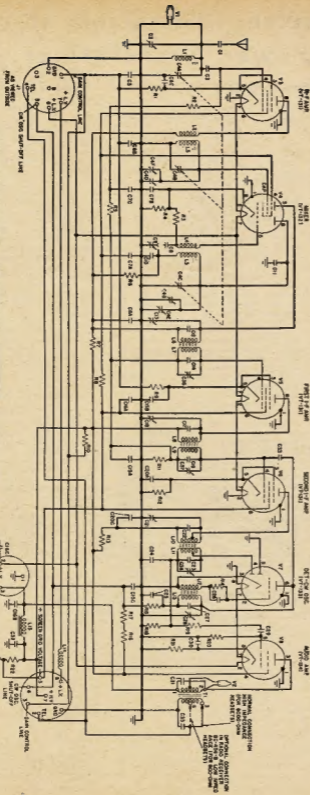
It's the BEST ELECTROLYTIC

Tropical and compact U.C.C. Electrolytic Capacitors are designed for use over a wide operating temperature range. Features include: • All-aluminum non-corrosive internal construction. • Pure aluminum foil and paper winding. • Tinned copper leads for safe, easy soldering. • Separate neg. tag: no "open circuits" due to chafed foil in case spinning.

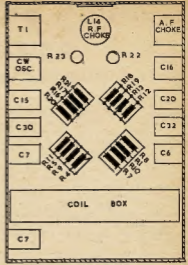
UCC CAPACITORS
FOR EVERY APPLICATION
UNITED CAPACITOR CO. PTY. LTD.
433 Punchbowl Road, Enfield, N.S.W. LF 3611
U.C.C. 4-13

C1-11 pF.
C1-15 pF.
C1-16 pF.
C1-17 pF.
C1-18 pF.
C1-19 pF.
C1-20 pF.
C1-21 pF.
C1-22 pF.
C1-23 pF.
C1-24 pF.
C1-25 pF.
C1-26 pF.
C1-27 pF.
C1-28 pF.
C1-29 pF.
C1-30 pF.
C1-31 pF.
C1-32 pF.
C1-33 pF.
C1-34 pF.
C1-35 pF.
C1-36 pF.
C1-37 pF.
C1-38 pF.
C1-39 pF.
C1-40 pF.
C1-41 pF.
C1-42 pF.
C1-43 pF.
C1-44 pF.
C1-45 pF.
C1-46 pF.
C1-47 pF.
C1-48 pF.
C1-49 pF.
C1-50 pF.
C1-51 pF.
C1-52 pF.
C1-53 pF.
C1-54 pF.
C1-55 pF.
C1-56 pF.
C1-57 pF.
C1-58 pF.
C1-59 pF.
C1-60 pF.
C1-61 pF.
C1-62 pF.
C1-63 pF.
C1-64 pF.
C1-65 pF.
C1-66 pF.
C1-67 pF.
C1-68 pF.
C1-69 pF.
C1-70 pF.
C1-71 pF.
C1-72 pF.
C1-73 pF.
C1-74 pF.
C1-75 pF.
C1-76 pF.
C1-77 pF.
C1-78 pF.
C1-79 pF.
C1-80 pF.
C1-81 pF.
C1-82 pF.
C1-83 pF.
C1-84 pF.
C1-85 pF.
C1-86 pF.
C1-87 pF.
C1-88 pF.
C1-89 pF.
C1-90 pF.
C1-91 pF.
C1-92 pF.
C1-93 pF.
C1-94 pF.
C1-95 pF.
C1-96 pF.
C1-97 pF.
C1-98 pF.
C1-99 pF.
C1-100 pF.

SCHEMATIC DIAGRAM OF COMMAND RECEIVER



R1-200 ohms
R2-200 ohms
R3-200 ohms
R4-200 ohms
R5-200 ohms
R6-200 ohms
R7-200 ohms
R8-200 ohms
R9-200 ohms
R10-200 ohms
R11-200 ohms
R12-200 ohms
R13-200 ohms
R14-200 ohms
R15-200 ohms
R16-200 ohms
R17-200 ohms
R18-200 ohms
R19-200 ohms
R20-200 ohms
R21-200 ohms
R22-200 ohms
R23-200 ohms
R24-200 ohms
R25-200 ohms
R26-200 ohms
R27-200 ohms
R28-200 ohms
R29-200 ohms
R30-200 ohms
R31-200 ohms
R32-200 ohms
R33-200 ohms
R34-200 ohms
R35-200 ohms
R36-200 ohms
R37-200 ohms
R38-200 ohms
R39-200 ohms
R40-200 ohms
R41-200 ohms
R42-200 ohms
R43-200 ohms
R44-200 ohms
R45-200 ohms
R46-200 ohms
R47-200 ohms
R48-200 ohms
R49-200 ohms
R50-200 ohms
R51-200 ohms
R52-200 ohms
R53-200 ohms
R54-200 ohms
R55-200 ohms
R56-200 ohms
R57-200 ohms
R58-200 ohms
R59-200 ohms
R60-200 ohms
R61-200 ohms
R62-200 ohms
R63-200 ohms
R64-200 ohms
R65-200 ohms
R66-200 ohms
R67-200 ohms
R68-200 ohms
R69-200 ohms
R70-200 ohms
R71-200 ohms
R72-200 ohms
R73-200 ohms
R74-200 ohms
R75-200 ohms
R76-200 ohms
R77-200 ohms
R78-200 ohms
R79-200 ohms
R80-200 ohms
R81-200 ohms
R82-200 ohms
R83-200 ohms
R84-200 ohms
R85-200 ohms
R86-200 ohms
R87-200 ohms
R88-200 ohms
R89-200 ohms
R90-200 ohms
R91-200 ohms
R92-200 ohms
R93-200 ohms
R94-200 ohms
R95-200 ohms
R96-200 ohms
R97-200 ohms
R98-200 ohms
R99-200 ohms
R100-200 ohms



FRONT PANEL

View of receiver, inverted, and with front panel towards you. There are several other resistors and condensers not shown in the above diagram, but they are easily identifiable by inspection.

The layout and circuit diagram of the BC454A (3-8 Mc.) Receiver shown vary only slightly with different models.

Ross A. Hull Memorial V.h.f. Contest, 1953, Results

This Contest as usual aroused considerable interest and although only 33 logs were submitted, practically every active v.h.f. station participated. Conditions generally were very much poorer than in the prior contest, openings being shorter and localised, and from an analysis of the logs, break-throughs from ZL were very poor except on the northern path to VK4 and even then not as numerous as in the past. The shorter period for the contest was well received.

The outright winner was VK4BT, scoring 1368 points from 271 contacts, followed by VK4KK, 809 points, and VK5QR, 708 points. Certificates will also be issued to the following Stations and ZL District winners: VK2WH, VK3IM, VK6BO, VK7LZ, ZLIABG, and ZL2BJ.

SCORES

Points		Points	
VK4BT	1368	VK2XO	291
VK4KK	809	VK2VW	271
VK5QR	708	VK2ADS	247
VK6BO	682	VK2JX	234
VK4PQ	583	VK7LZ	217
VK3IM	571	VK5JD	216
VK4NG	544	VK2ABC	213
VK2WH	486	VK5JO	202
VK4XJ	452	ZL2HP	199
VK6HK	447	VK7AB	180
VK6WG	440	ZL2DS	129
VK3XK	386	VK3ABA	124
VK2WJ	370	VK2HE	123
ZL2BJ	356	VK2BY	86
VK2DQ	347	VK3YS	67
ZLIABG	295	VK7BQ	47

Check Log: VK3GE, 134 points.
—Federal Contest Committee.

More Effective Utilisation of the Small Power Transformer*

An Economical Dual Power Supply for the Novice-Type Transmitter

It is perhaps not generally appreciated that there are some factors entering into the design and use of replacement type power transformers that can be employed to advantage, although in somewhat unconventional fashion, in powering small transmitters. The resultant saving in weight, space, and money is worth considering when laying out a power supply circuit for, for example, a novice, portable, or first plain low-power rag-chewing transmitter consisting of an oscillator, a buffer (possibly), and an 807 or comparable tube as the final amplifier.

The accompanying circuit shows a supply that delivers two voltages—one, approximately 240 volts at a load of 30 Ma. or so; the second, 600 volts at a load of 80 to 100 Ma. The transformer is a replacement type made by several manufacturers, and has a high-voltage secondary rated at 360 volts each side of the centre tap and a d.c. output current of 110 Ma. Yet it is not overloaded when delivering the outputs mentioned above; if anything, it runs considerably cooler than it would at its "normal" ratings.

There is nothing resembling magic in it. It is simply a question of utilising to best advantage the power capacity built into the transformer. There are three reasons why the ratings seemingly can be increased, assuming that a transformer of the receiver or replacement type is properly designed: first, it is built for continuous operation at full load; second, it is designed for working into a condenser-input filter; third, it has filament windings designed to handle a good-sized receiver or amplifier.

CONTINUOUS VS. INTERMITTENT DUTY

The amount of power that a transformer can handle safely is determined by the temperature at which it can operate without danger of damaging the insulation. The temperature in turn is determined by the rate at which heat is generated—i.e., the power loss in the transformer—and the rate at which the generated heat is radiated. The final temperature is reached when these two rates just balance each other.

There are two sources of power loss in a transformer, loss in the iron core—in a given transformer, this loss is practically constant regardless of the power being handled—and loss in the windings because of the current flowing through the resistance of the wire. The latter, generally called "I²R" or "copper" loss, is very small (occurring only in the primary) when there is no output, but increases rapidly as more power is drawn from the secondary. Most transformers are designed with the object

• Until you sit down with the catalogues and try to do it, it is hard to appreciate the obstacles that lie in the way of designing a compact and economical power supply for the simple rig—one having one or two receiving type tubes driving an 807 or similar amplifier. This article describes one solution, based on taking about twice the rated amount of plate power from a low-cost replacement type transformer—yet with the transformer running cooler than it would in "normal" service!

The supply is a dual unit furnishing both low-voltage and high-voltage outputs which, depending on line voltage and the particular components used, are approximately 600 to 650 volts at 100 to 130 Ma. and 220 to 240 volts at 25 to 50 Ma. It supplies all filament and plate power for the small transmitter and, when wired as shown in Fig. 1, is intended to be used with a break-in set—that is, the plate and filament voltages are always "on." The heaters of the 6X5GT rectifiers go on immediately when the line cord is attached, but a primary switch is provided for the combination filament-and-plate transformer. This is to make sure the 6X5GTs are hot before the 5V4G rectifier goes into operation, because if the latter were to conduct first a negative voltage appears across the low-voltage tap until the time when the 6X5GTs begin conducting.

If you aren't interested in why this seemingly overload on a small transformer is possible, the information above, plus the captions on the diagram, is about all you need to build and use a similar unit. The information is principally for those who might want to apply similar principles using components having different ratings.

of making the core losses and copper losses just about equal each other when the transformer is delivering its full rated load, because the over-all efficiency of the transformer is highest under such conditions.

Now let us assume that the secondary load is a keyed c.w. transmitter, with the key down approximately half the time. Then the average power loss in the copper is only one-half what it would be were the key held down continuously. Hence we can double the key-down power loss and still not have the average loss exceed the value for which the windings were designed. Since

the loss varies as the square of the current, the current taken by the transmitter can be increased in the ratio of $\sqrt{2}$, or 1.4 times the output current for which the transformer is nominally rated.

This example is somewhat oversimplified, since a transformer of the type we are discussing probably would not be entirely without load with the key up. At least some of the filament windings no doubt would be used, and there would probably be a bleeder across the high-voltage output consuming some power. These would reduce the ratio somewhat. However, the main point applies—if the transformer is designed for continuous operation, more power can be taken from it when a substantial part of the load is intermittent. (By intermittent is meant here that the load is on for relatively short periods—up to several minutes, possibly—and off for at least equal intervals.) But it does not apply to transformers rated for intermittent operation, such as the high power equipment sold under I.C.A.S. ratings.

CONDENSER- VS. CHOKE-INPUT FILTERS

The copper loss in the high-voltage secondary of a transformer working into a condenser-input filter is appreciably higher than it is when the same secondary delivers the same d.c. output current through a properly-designed choke-input filter. This is because the current waveform is highly distorted with condenser input and the current flows in pulses rather than in a continuous stream. There is no fixed ratio between the secondary losses with the two types of filters; it depends on the filter constants, the transformer characteristics, and the kind of rectifier tube or tubes used.

Measurements made with typical filters of both types, used with the transformer in the circuit diagram, showed that for the same d.c. load current the secondary power loss was between 2 and 2.5 times as great with a condenser-input filter, using a high-vacuum rectifier. Consequently, about 50 per cent. more current could be taken from the transformer with choke input than with condenser input, for the same secondary heating. Unfortunately, with choke input the d.c. output voltage is considerably lower than with condenser input so there is no marked power advantage—it is simply a matter of swap-

* Although this is a single measurement, it is probably safe to assume that the same ratio will hold in any comparable supply—that is, one using a high-vacuum rectifier and an input condenser of about 8 μ F. The ratio will increase if a mercury-vapor rectifier is used, and also to some extent if the capacitance of the input condenser is increased.

ping current for voltage. However, a check of the primary current showed that for the same d.c. power output the primary current with the choke-input filter was only about 0.7 of the value with condenser input. Hence the primary is better utilised with choke input. This is an important consideration, since all the power eventually realised has to pass through the primary.

The question is how to cash in on the advantage that results from choke input, since using it reduces the voltage to a value that would not be much good for an 807. There is an "out" in the bridge rectifier.

BRIDGE VS. CENTRE-TAP RECTIFIER

The bridge rectifier is not much used in Amateur circuits, although its char-

acteristics are generally known. Principally, it requires four rectifier elements but does not require a centre tapped transformer. Thus by using the whole secondary the d.c. output voltage is twice what could be secured with a centre-tap rectifier.

It does not automatically follow that the same d.c. output current can be taken in both cases. Twice the voltage at the same current means that the power output is doubled, and that in turn means that the transformer losses are at least doubled in the ordinary case. For example, in a transformer designed for transmitting plate supplies using choke-input filters, the bridge rectifier seldom offers any advantage because if the output voltage is doubled the current must be halved in order to stay within the transformer capabilities. But with a small replacement type transformer we have been discussing this is quite possible. First, as described above, there is a reduction in primary current in changing from condenser to choke input. This is worth, in this specific case, about 25 more watts of high-voltage output. Second, in powering a small transmitter we do not usually

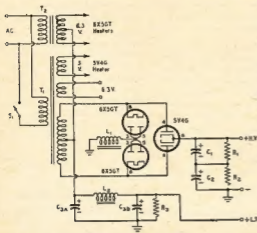


Fig. 1.—Circuit diagram of the dual power supply. Note that the line switch, S1, is not in series with the primary of T2, the filament heating transformer for the 6X5GTs, but controls only the larger transformer, T1. This is to prevent turning on the plate voltage before the 6X5GT cathodes have come up to temperature, for the reason described elsewhere. This unit can be built on a chassis 7" x 7" x 2".

MARINE TYPE MRT12 TRANSCEIVER

Designed for Small Ship operation. May also be used for Amateur Bushfire Work, etc. Very reasonably priced. Full details and descriptive leaflet from Firms handling Bright Star Crystals or direct.

FS6 Transceiver and Power Supply, new condition, one only, £18/10/-.

Limited number Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.

Transmitters altered for Bush Fire and Fishing Boat Work. CRYSTALS, as illustrated, 40 or 80 mc, AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.



20 metre Zero Drift £5 each.
Large, 40 or 80 mc unmounted, £2 each.

Special and Commercial Crystals—Prices on application.

Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Hesling Ltd., 181 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 408 Lonsdale St., Melbourne; Prices Radio, 3-4 Angel Place, Sydney.

DC11 TYPE CRYSTAL HOLDERS WANTED. ANY QUANTITY.

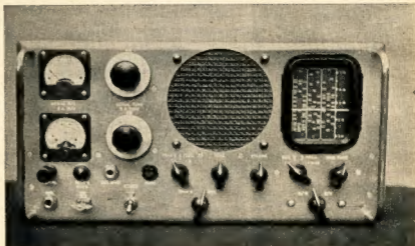
Screw-type Neutralising Condens. (National type), suits all triode tubes, polystyrene insulation, 19/6 ea.

BRIGHT STAR RADIO

46 EASTGATE ST., OAKLEIGH, S.E.12, VIC.

Phone: UM 3387

Prompt delivery on all Country and Interstate Orders. Satisfaction Guaranteed.



Waltham

DISPOSALS!

This Month's Special Bargains

0-9 AC/DC Ammeters 12/6
0-1 RF Ammeters 9/6
Visual Indicators 9/6
Radio Compass Indicator
Heads 9/6
Carbon Throat Mikes 8/6
MU4 Rectifiers 1/8
Headphones, low impd. 7/11
4-pin Cannon Plugs and
Sockets 2/6
Control Box BC451A 7/6
Command Modulators Type
BC456E £3/10/-
24v. Genemotors: Input 13
amp., output 300v. at 280
Ma., 150v. at 10 Ma., 14.5v.
at 5 amp. 29/6
Radar Receivers, 301A 119/6
Double Button Mikes 3/8

TRANSMIT. CONDENSERS

Neutralizing—
National type NC75, 3 inch
Plates 30/-
B.U.D. type NC853, 2 inch
Plates 25/-

Midget Transmitting—
Single type NC897 35 pF 25/-
Dual type NC928 15 pF 30/-

Dual Transmitting—
JC 1562 150 pF. £3
JC 1561 110 pF. £2/10/-
JC 1560 80 pF. £2/10/-
JC 1569 200 pF. £3/10/-
JC 1562 70 pF. £2/10/-
JC 1567 40 pF. £3

Single Transmitting—
JC 1521 33 pF. 17/6
JC 1532 55 pF. £1/8/-
JC 1544 40 pF. £1/10/-

Post. & Pack. Vic. 4/-; N.S.W.,
S.A., Tas. 5/-; W.A., Qld. 5/6

CONTROLLER, TYPE 4

Aircraft Transceiver remote
control. Containing a 5-bank
cancelling push-button
switch, lock and non-lock;
P.M.G. type Key Switch;
small two-way Plug, and
five small bezels and lamp
holders. Price 17/6.

Post. & Pack. Vic. 4/6; N.S.W.,
S.A., Tas. 5/-; W.A., Qld. 7/6

CRYSTALS

500 Kc., mounted on panel
with various other useful
components. Price £1/10/-.
Post. & Pack. Vic. 3/6; N.S.W.,
S.A., Tas. 4/-; W.A., Qld. 4/6

RADIO TRANSCEIVER AND INDICATOR UNIT V.H.F. Approximately 180 Mc.

Type 1045. Valve line-up in Transceiver: 2—RL18, 1—VR135, 1—5V4, 1—EA50, 1—RL37, 6—EF50, 1—6SN7, 1—GL2050 (Thyatron), 2—VR150/30 (Voltage Regulators), 1—884 (Gas Triode). This unit also contains a motor driven Selector Switch, two superbly designed Polystyrene six-position rotary Coil Turrets, and an I.F. Transformer strip ideally suitable for use with Television. Band width 10 Mc.
Indicator Unit, Type 1047. Valve line-up: 7—EF50, 1—879, 1—VR54. Also contains a 3,000 type Relay 2,000 ohms, ten assorted Potentiometers, a two-bank Ceramic Wafer Switch, and an illuminated scale (5BPI tube and shield not included).
These two Units are brand new, and are packed together in their original packing cases.

PRICE £21/10/- the two.

Transceiver £15/0/0 } if supplied separately.
Indicator Unit £7/10/0 }

METERS

Special Offer. Three R.F. Meters, amp. or milliamper, various ranges, all in good condition. Useful for conversion and re-calibrating. Three for 22/6 Post Free.

AERIAL CONTROL BOX

Type 442A, contains 50 pF. Western Electric Condenser. Aerial Indicator Meter 0-10 amp. Thermo-couple, 24v. miniature Relay, and useful connecting terminals. Price 25/-.

Post. & Pack. Vic. 3/6; N.S.W.,
S.A., Tas. 4/-; W.A., Qld. 4/6

TRANSMITTING TUNING

UNITS by General Electric
Type TU10B, 10,000 to 12,500
Kc. £2/10/-
Type TU7B, 4,500 to 6,200
Kc. £2/10/-
Type TU6B, 3,000 to 4,500
Kc. £3/10/-
Type TU9B, 7,700 to 10,000
Kc. £2/10/-

ASB RECEIVERS

800 Mc. approx.

Valve line-up: 2—855 (Acorn triodes), 8—6AC7, 1—855, 1—6H6. Also contains eight H.F. I.F. Transformers and 0.001, 0.003 pF. mica condensers. Price £6/19/6.

319-321 SWANSTON STREET 393 FLINDERS STREET, MELBOURNE

Address all Correspondence to Box 5234, G.P.O., Melbourne.

WRITE FOR OUR FREE BARGAIN CATALOGUE.

PLEASE NOTE—Owing to high labour costs involved, we regret we are unable to accept Mail Orders under 15/-.

TYPE 72 GENEMOTORS

These Genemotors can be simply converted to run as a fractional horse power 230-250v. AC Motor, by merely altering the connections. An ideal piece of bench equipment for the handyman and hobbyist. Dimensions: 7" long, 3 1/4" diam. and a 1 1/4" 3/16" grooved pulley is supplied. Price 39/6.

Post. & Pack. Vic. 3/-; N.S.W.,
S.A., Tas. 7/-; W.A., Qld. 8/6

COMMAND RECEIVERS

BC453 190-550 Kc. £12/10/-
BC454, 3-6 Mc. £7/10/-
BC455, 6-9.1 Mc. £7/10/-

COMMAND XMITTERS

BC457, 4-5.3 Mc. £7/10/-
BC458, 5.3-7 Mc. £7/10/-
BC459, 7-9.1 Mc. £7/10/-

COMMAND RECEIVER CONTROLS, Type BC450

3 Slow Motion Dials, 6 Single pole double throw Switches, 4 Miniature Jacks, 3 Volume Controls (approx. 5,000 ohms). Price £1/15/-.

Post. & Pack. Vic. 6/-; N.S.W.,
S.A., Tas. 5/6; W.A., Qld. 11/-

MODULATING UNIT

Type 169, containing Klystron Tube, three Neon Stabilisers, one EF50, two half-wave Selenium Rectifiers, one 5U4 Rectifier, one CV85, Potentiometers gears, Resistors, high voltage Condensers and Transformer. Price £4/19/6.

TRANSMITTER-RECEIVER

Type RT34/APF13, Frequency Modulator, approx. 450 Mc. Valve line-up: 9—6AG5, 5—6J6, 2—2D21, 1—VR105. Also contains Dynamotor, input 27v. 1.5a., output 285v. 60 Ma. Price £17/10/-.

TRANSMITTERS

Type TR3548

Containing Valves: 1 Rectifier VU111, 1 EF50, 1 10 Cm. Magnetron Valve complete with magnet, 1 Crystal Diode Type 1N21; and 1 24v. Blower Motor. Brand new. Price £5/19/6.

HAND GENERATORS

Gibson Girl Hand Crank Generators. Output: high voltage 250v. 100 Ma., low voltage 6-8v. 2 amp. Ideal for conversion to power supply for portable transmitter. Also suitable for conversion to Wind Battery Chargers. Price £4/10/-.

Post. & Pack. Vic. 5/-; N.S.W.,
S.A., Tas. 6/-; W.A., Qld. 8/6

BENDIX RADIO AZIMUTH

CIRCLE LOOP AERIAL CONTROLS, Type MN22A

Price 35/-.

Post. & Pack. Vic. 4/9; N.S.W.,
S.A., Tas. 5/-; W.A., Qld. 7/6

ASB TRANSMITTERS

Containing six Acorn type Transmuting Valves, high voltage vacuum Relays, and many other useful components. Price £3/17/6.

have to make full use of the filament secondaries. Transformers of the general type used here all have a 5-volt 3-amp. winding for the rectifier tube and a 6.3-volt winding with a current rating varying slightly from make to make. This particular one is rated at 4.5 amp., which will do well enough for discussion. If a rectifier tube having a 2-amp. filament is used we release 5 watts to the high-voltage end. If the transmitting tube filaments do not take more than 1.5 amp., a reasonable value, we release an additional 19 watts to the high-voltage supply, a total of 24. Added to the 25 saved by using a choke-input filter, we have close to 50 watts of primary capacity to spare for the extra load we expect to take from the secondary. It is ample.

RECTIFIER CONSIDERATIONS

A bridge rectifier offers some practical difficulties, if the cost is to be kept to a minimum. There would be no problem at all if there were available a double rectifier having separate, indirectly heated cathodes and a cathode-to-heater break-down rating of 1000 volts or so. The best we could find in the tube manuals was the 6X5GT, which is a full-wave rectifier that does not have separate cathodes, and has a heater-cathode rating of only 450 volts peak. Two tubes were required, both to get the needed separate cathodes and also to get sufficient current-carrying capacity, by paralleling the elements in each tube. It was considered out of the question to light the filaments from the 6.3-volt winding on the transformer, since that winding would be connected to negative high voltage and ground in the normal wiring of a transmitter, thus making the peak heater-cathode voltage on each 6X5GT close to 1000 volts. Hence a separate small filament transformer was used for these two tubes, with the secondary connected to the centre tap of the high-voltage winding as shown in Fig. 1. This reduces the peak heater-cathode voltage on each tube to about 500 volts, slightly over the rating but not excessively so.

To use the bridge rectifier with a transformer having appreciably higher secondary voltage would require two extra filament transformers instead of one, so that each rectifier cathode could be connected directly to the filament and thus eliminate the heater-to-cathode voltage problem. The insulation requirement is thereby transferred from the tube to the filament transformer.

FILTERS

The higher output voltage from the bridge rectifier of course necessitates filter condensers having higher working ratings than the ordinary electrolytic. For economy's sake this power supply uses a single-section filter, the input choke, L1, being a type also standard with several manufacturers and rated at 10.5 henrys at 110 Ma. d.c. Although the total current through it is normally around 150 Ma. there is no danger of burning it out, because the intermittent operation considerations apply equally as well to the choke as to the transformer. Since a bleeder is a necessity, a pair of resistors, R1 and R2, is used

to divide the voltage equally so that electrolytic condensers can be used in series.

This power supply uses an old stunt that seems to have dropped out of use in recent years. The d.c. voltage at the centre tap of the high-voltage winding is approximately half the d.c. output voltage from the bridge rectifier (with the 6X5GTs, the secondary forms an "inverted" centre tap rectifier system) and so offers a convenient means for taking off a lower voltage to run an oscillator, the amplifier screen, and so on. This tap is provided with a filter of its own, since good smoothing is needed for the low-level stage or stages in a transmitter. Only the input choke, L1, is common to both filters. It was made common to both in order to save the cost of an extra choke. Entirely separate filters, with both input chokes in the positive lead (as is customary) could be used instead.

A comparison between the circuit shown and separate filters with individual input chokes in the positive lead showed some differences for which we are unable to account completely; putting the choke in the negative lead seems to give some of the characteristics of both choke- and condenser-input filters. We mean by this that the output voltage from the bridge rectifier is higher than it should be, theoretically, with a choke-input filter, although it is not as high as with condenser input. With the choke in the positive lead the load voltage comes down to the proper value. The transformer capacitance shunting the choke when it is in the negative lead has been suggested as one explanation, but tests show that it does not begin to account for the whole effect. The net result is that with a 100 Ma. load the output voltage is 600 with

the choke in the negative lead as against slightly over 500 with it in the positive lead.

HEATING

Several heat runs were made on the unit under representative operating conditions, using it to power a 6V6-807 transmitter in which both tubes were keyed. In a typical run of several hours during which the transmitter was kept on the air as much as possible in ordinary rag-chewing, the secondary winding showed a temperature rise of approximately 35°C. over an ambient temperature of 27°C. (80°F.) and the primary a rise of 31°C. The plate input to the 807 was adjusted to 53 watts (630 volts at 85 Ma.), the figure at which the tube happened to work most efficiently. The measurements were made by the resistance method, and allowing the customary 10° for hot spots gives a final secondary temperature of a little over 70°—far below the 95° generally considered the maximum safe temperature for the type of insulation used in these transformers.

In another more severe test the unit was operated with the same load on continuously for a half hour, off 15 minutes, and on continuously for another hour. The secondary showed a temperature rise of 58° after this test, still within safe limits.

For comparison, a small transformer operated at its ratings in a condenser-input receiver supply also was measured after a few hours of continuous operation, and the temperature rise was measured to be 61°C. Like most transformers in such supplies, the temperature of the small unit was such that the hand could not be held on it continuously. The transformer in the supply



RIGHT IN THE HEART OF THE CITY—

yet you can park for those precious few minutes!

UNITED RADIO DISTRIBUTORS PTY. LTD.

Radio Electric Wholesalers

SHOWROOMS: 173 Phillip St., SYDNEY — OFFICES: 183 Pitt St., SYDNEY

Telegrams: URD Sydney — Phone BL 3954 (3 lines)

Make it a HABIT to call in personally—phone your order—or write to U.R.D. for your **ENTIRE RADIO AND ELECTRICAL REQUIREMENTS.**

Licensed amateurs! We have the very equipment and components you want!

Introduce yourself—we want to cultivate your confidence! Remember—Open daily, 8.30 a.m.-5.00 p.m. and Saturday mornings, 8.30-11.30 a.m. **Make it a date, eh?**

shown here, on the other hand, while noticeably warm, was by no means too hot to hold continuously, after the "half-hour on, etc." test described above. !

OUTPUT VOLTAGES AND CURRENTS

The 40,000 ohm bleeder on the high-voltage tap holds the no-load voltage at about 770 volts (with a line voltage of 117). The no-load voltage on the low tap is held at about 300 by the input choke and high-voltage bleeder, and so the low-voltage bleeder is used simply to discharge the filter condensers. There are no set current ratings on this unit, but as more current is taken from one tap less should be taken from the other. Bear in mind that the current from the low-voltage tap has a greater heating effect on the secondary because it is

coming from a centre-tap rectifier. The transmitter we have used with the unit happens to take about 30 Ma. from the low-voltage tap, at which current the output voltage is 240. Another 20 Ma. could easily be taken for an additional buffer or frequency multiplier.

On the high-voltage side the voltage drops off as the load current is increased, principally because of increased drop in the rectifier tubes. Because of this the practical limit was about 60 watts with the particular transformer used. This is a quite satisfactory power level for a small transmitter. The filtering is more than adequate to bring "pure d.c." reports, the ripple measuring 0.4 per cent. on the low-voltage tap and 3 per cent. on the high voltage, at the load currents mentioned earlier.

VALE

DAVID MONK ADAMS, VK2AE

It is with deep regret the passing is recorded of Dr. David Monk Adams, VK2AE, at the early age of 35.

David was a very active and enthusiastic Amateur pre-war and became very well known in DX circles—one of the very few Australian Amateurs to contact 100 different countries pre-war. First licensed in 1934, he was then only 14 years of age and probably the youngest Amateur in Australia. He had qualified for his A.O.C.P. sometime previously. In 1938, he won the junior section of the I.E.U. Contest and in 1937 participated in the first Australian National Field Day competition.

David's scholastic career was brilliant, graduating B.Sc. with first-class honours and the University Medal in 1945, M.B., B.S. with second-class honours in 1946, and B.A. in 1947. He had also completed his thesis for his doctorate in Philosophy. In 1948 he proceeded to Canada on a three year Rockefeller Scholarship for medical research. On his return he was appointed a lecturer at Sydney University.

David suffered ill-health from an early age and in Canada convalescence for 12 months after a serious illness. He was present at this year's N.S.W. Division's Hamfest and spoke of his plans for a re-entry into the hobby.

To his family and his many friends condolences are extended.

JACK KEBBLEWHITE, VK2IN

The news of the passing of Jack Kebblewhite, VK2IN, on 10th May, at the age of 41 was received with deep regret.

Jack, although only licensed post-war, was an ardent radio enthusiast for many years and was nearly sixty years of age when he qualified for his A.O.C.P. He learnt the Morse code thoroughly and was always an adept user of the key. The 10 m. band interested him most, and using folded dipoles contacted much DX on s.w. and phone. He was active at times on 80 bands to 10 through to 36 mcs. His equipment, always beautifully constructed, was admired by all who had the privilege of inspecting it.

Jack was an ardent supporter of the W.I.A. although not actively engaged in its affairs—his business commitments were too extensive—he believed the future of Amateur Radio lay in a strong and effective Institute. Jack in civil life was a leading Sydney businessman—Managing Director of Bead Watsons Ltd., for 25 years.

To his family condolences are extended.

FEDERAL QSL BUREAU

RAY JONES, VK2RJ, MANAGER

Old friend, Dan Wilkinson, ELIAB, informs me that 2L1 loses a portion of the 3.5 Mc. band as from 1st September. New allotment will be 3500 Kc. to 3600 Kc.

Information has been received that a National Society has now been formed in Chile, and is hoped to thereby group the Radio Clubs presently scattered all over that country. The new association is styled Asociación de Radio Aficionados de Chile (A.R.A.C.H. for short) and has established its QSL Bureau with QTH at Box 5323, Santiago, Chile. Our good wishes are extended to the new body.

The Gothenburg Radioamateurs Society—G.S.A.—has decided to issue the W.G.S.A. certificate available to world-wide Amateurs. Conditions are: Contact with Gothenburg Amateurs since 31st December, 1952. Two stations in Gothenburg must be worked—the same one on two separate bands will suffice and confirmations, together with three international reply coupons, must be sent to the W.G.S.A. Manager, SM6ID, Göteborgs Sändare Amatörer, Box 609, Gothenburg 6, Sweden. A list of Gothenburg stations is held at the Federal QSL Bureau.

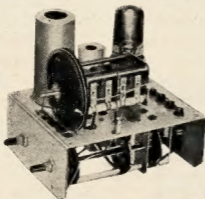
An additional new award is the A.R.T. Certificate del Mediterraneo. Requirements are (a) Certified contact with 22 countries washed by the Mediterranean Sea; (b) Certified contact with 30 provinces of the Italian Republic. Contacts may only be had with fixed stations and be dated subsequent to 1st June, 1953. Three international reply coupons must accompany the application for the certificate which should be addressed to A.R.T. Segreteria Generale, via S. Paolo 10, Milan, Italy. Certificates, however, can be sent to the Federal QSL Manager for certification, thus avoiding the expense and risk of forwarding the overseas. A list of the Mediterranean countries and a list of the Provinces of Italy are held at this Bureau.

You Have No Doubt Often Heard
The Saying—

"THE VFO TO END ALL VFO'S"

Well, This Is It!

ORDER NOW — — — AVAILABLE SHORTLY



Transmitter
VFO
Unit

MADE
IN
ITALY
BY
"GELOSO"

Type M4/101: A very stable five-band three-tube VFO unit, fully wired and tested.

Bands: 3.5-4, 7-7.45, 14-14.4, 21-21.6, 28-29.8 Megacycles.

Dial: Fully calibrated and band spread over 180 degrees.

Tubes: 6J5 oscillator, 6AU6 isolator, 6V6 output (not supplied).

Output: Tuned on each band, giving at least 3.5 Ma. grid current to a single 807 on all bands.

Power Supplies (not supplied with unit): 400 volts at 32-54 Ma.

PRICE (including Sales Tax): **£10/4/9**

INCLUDE FREIGHT AND EXCHANGE WITH ORDERS

WILLIAM WILLIS & CO. PTY. LTD.

428 BOURKE STREET, MELBOURNE, C.1

Phone: MU 2426

Established 90 Years

FIFTY MEGACYCLES AND ABOVE

N.S.W. V.H.F. GROUP

50 Mc: There has been very little activity on this band of late, we must use this band if we want to hold it. The usual few are holding the fort. Some country activity is noted, CJEF 2XO has 24 hour link with Peter 2PJ with signal S6/9 2JK has been heard in Lismore at strength 9. 7 Mc. gossip has it that at least four chaps are preparing for 6 mnx.

144 Mc: As usual, this band is very active, and becoming increasingly so in the country areas. These country chaps are doing a good job. Country areas north report, 2AAM flying to Urunga with 2 mx gear with 2w., hopes to contact Urunga boys, he is flying at 8,000 ft. 2JK re-building 2 mx gear for mobile use. 2ADN/M QSOed 2XO over 15 miles at good strength. 2PA and 2AHH on 2 mx with super regens and mod. osc. Western activity, Bill 2ACT (Dubbo) QSOed Norm 2JW (Orange), 2BT (Young) has QSOed 2TA. This is good work.

2AMV/M visited Sydney and Wollongong, working 2 mx all the way, he had many contacts including 2ANF, 2HO, 2LZ, 2LS, 2APQ, 2WJ. John was least heard at Medibath. He had an excellent signal even while travelling fast. 2AXS is on 2 mx with an 829, so keep a lookout for him.

2DB and 2ALO spent their holiday at the top of Mt. Gibraltar, Bowral, working 2 mx gear, both having separate tx's and rx's, and each in separate locations on the mountain. They also had 7 Mc. gear. They put fine signals into Sydney, 59 plus. 2HE is re-building new portable gear and should be about soon. 2BQ of Tumut has QSOed Hugo 2WH at Forbes, 2ACT has QSOed 2EI (Parkes) —this is all of 60 miles.

John 2ANF has worked 2WH with n.b.f.m. both ends, it proved successful. Joyce 2AMJ has been working on 144 Mc. and has a good signal (mod. osc.), she is on the h.f. end. Ralph 2ARM is now among the big signals on 144 Mc. and has excellent quality; he is using 3 x 3 beam. Perc. 2APQ has also a fine signal and nice quality. 2GU and 2PM have been active from Canberra and heard at week-ends.

2ANF has contacted 2ACT and 2AMR (Dubbo) quite a lot of late, with signals varying from S3 to 5. Good going boys, 2WH and 2ANF now use i.s.k. and n.b.f.m. as well. 2AJZ and 2ABD have worked 2WH a number of times, signals S3 to 6. A lot of interest is now given to n.b.f.m. in Sydney and Forbes. To date good results have been had with this system, n.b.f.m. sigs being received at Forbes and Newcastle when a.m. could not be copied. Reception is being done mostly on slope, but at least three or four stations have discriminators (outboard units).

"The autumn field day" was a great success, and at least seven mobile stations were out in the field. Home stations were on the same footing re the gaining of points, at 1 point per mile. Some very good scores will result. 2ANF/M Mt. Tomai, 2ATO/M Mt. Pid-

dington, 2OA Mt. Boyce, 2YE Terry Hills, 2ABB Razorback, 2ABO/M anywhere on Mountains, 2JW Mt. Canobalas, 2AGL/M Blackheath. There were 31 stations participating. The results were not out when this went to press.

Most all above stations have or are building xtal control converters and operate on xtal tx's.

We apologise to all for missing the press last month. With our new President, Bob Winch 2OA, the V.h.f. Group held a meeting on 1st May, there was a very good roll-up. Business was discussed and then a recording of the activities of a major Civil Defence Emergency Network practice was played back to the Group. This was received well, and apart from its entertainment value, proved quite instructive. Two recordings were played and we thank John 2JU and Berry 2ABB for a really fine effort. All agree that there should be more of this.

The C.D.E.N., incidentally, is now well under way and many practices, both major and minor, have been conducted. All have been successful. We would like to hear from anyone interested in this movement on 144 Mc. News of this movement each month from now on will come under C.D.E.N. News.—2HO.

VICTORIAN DIV. V.H.F. GROUP

The final contest field day in the series took place on 26th April and a number of 2 mx portables were active from mountain locations despite rather

unsettled weather. 3NW returned to his old hunting ground of Mt. Donna Buang. Country stations portable were 3UI and 2ZL 3ADU and 3YS operated mobile during the early evening.

To stimulate interest and activity with gear suitable for civil defence communication, mobile work on the v.h.f. bands is being encouraged. It has been proposed to hold a "fox" hunt on 144 Mc. The mobile equipped "fox" car to be located by the other mobile operators with the assistance of fixed stations. It is possible to get fairly ample gear going for mobile work on 144 Mc. A crystal controlled tx with three valves, one a modulator, and a rx consisting of a converter into a super regen second detector makes a suitable set-up. There are other possible combinations, the main thing being to get something going.

The next V.h.f. Meeting will take place on 17th June in the Institute Rooms at 8 p.m. The agenda item is a talk by Kevin 3AMB, on hearing aid techniques. He will have equipment to illustrate his lecture. This should be of interest to those contemplating construction of miniature equipment. You are welcome to attend these meetings whether on the v.h.f. or not. If you have a friend interested in radio, bring him along.

An American Amateur magazine reports that W4AO, of Virginia, recently succeeded in getting 144 Mc. signals through to W3LZD, of Pennsylvania, by means of moon reflection. This is quite an achievement although apparently two-way QSOs have not as yet taken place.

THE "NEW ZEALAND" Radio Insurance Policy

Specially Designed for Radio Amateurs and Experimenters, it covers—

- ★ YOUR RADIO EQUIPMENT against fire, theft, storm and water damage.
- ★ YOUR OTHER PROPERTY against damage caused by breakdown or defect in your Radio equipment.
- ★ YOUR LEGAL LIABILITY to other persons, arising out of breakdown or defect in your Radio equipment.

FOR COMPLETE INSURANCE PROTECTION . . .

Consult Your Divisional Secretary or the Branch Manager

The New Zealand Insurance Co. Ltd.

Branches throughout Australia

OR COMPLETE AND MAIL THIS COUPON

The New Zealand Insurance Company Limited,
Box 65A, G.P.O., Melbourne.

Please supply me with details of the NEW ZEALAND
RADIO INSURANCE POLICY.

Name

Station

Address

VK3IM reports openings on 6 mx to VK4 on the 11th and 21st of April.

288 Mc.—3FO and 3BL are constructing gear for portable work. They plan a trip to Mt. Buninyong early in June. No news from the Geelong area, but 3APK did propose coming on. 3IM expected on band with crystal controlled tx. 3QO has gear but it's not being used. 3AAF and 3AFJ experimenting with vertical and horizontal polarisation. 3ALK has built another rx and now hears signals at home QTH. Stations in the Essendon area are known to be active, but no reports have been had from any of them.

Some general remarks on the 6 mx band may be of interest. Each year since VKs occupied this band there have been many Interstate and ZL contacts due to sporadic E propagation, which has been confined mainly to Nov. through to Feb. In the northern hemisphere the most active period for sporadic E contacts on 50 Mc. is May through to Aug., which is, of course, their summer season. It is of interest to note that the American Amateur magazines prior to the war reported many long distance contacts through this type of propagation in the 56-60 Mc. band. Although only limited reports are available, apparently pre-war VKs observed signs of it on the same band. The first 50 Mc. Interstate QSO was made on the 5th Dec., 1946, by 3MJ and 2NO. It wasn't long before all States and ZL were contacting one another. Although it is not suggested that Sporadic E was involved here, a notable 50 Mc. contact was on the 26th Aug., 1947, between VK5KL and WAC5/K. Subsequently, further sporadic VK5G contacts occurred. Much has been achieved, but there is room for more activity. Don't forget that the v.h.f. bands have plenty of operating space.

Following a suggestion that distances worked on 144 Mc. and above may be of interest, some of the long haul contacts are given. Dealing with 144 Mc., we would first like to acknowledge the fine performances of VK2AH—ZL3AR and VK5GL—VK6BO in Dec., 1951. The distance in each case is in the region of 1,325 miles. This is close to the American record which is about 1,400 miles. In the case of VK3, the longest distances worked are: For 144 Mc., 312 miles by 3GM (portable at Mt. Buninyong) to 7FF and TLZ, Leunceston. On 288 Mc., 3ANW at Sassafras worked 3BD, 17 miles. On 580 Mc., 3ANW at Donna Buang contacted 3AKE, 90 miles; and on 2300 Mc., 3ANW at Sassafras worked 3XA, 10 miles.—3ABA.

SOUTH AUSTRALIA

"Look out for 99 Mega" is the expression of caution passed on by the afflicted v.h.f. Ham to his brother adventurer. So went my blessing to Tom as he departed for Renmark, and I wasn't very surprised when a few days later a parcel arrived and inside—you've guessed it—a loop of wire attached to a small condenser and a lamp, the loop absorption meter, with a slip of paper which read: "See what you mean about 96 Mc.!" That simple contraption is a must in the Ham shack before any v.h.f. work is embarked on and grid dip osc. notwithstanding. A grid dip osc. can indicate resonance very well indeed at

v.h.f.—so well indeed that it can turn out to be the filament connections! Enough words of wisdom on that count. I can still remember a station calling another VK5 one Saturday afternoon and then discovering to his horror that he was about 15 cycles away from the f.m. station!

Jack 5LR is still making use of the bands and hopes to have worked five VK5 stations by the end of June if they will come on to the band. Keep it up Jack, you've got a cobbler in 5CA. Brian's a night owl though and delights in late sessions over cups of tea. Even Joe 5JO sticks to Sunday morning by preference and can be pretty sure of a contact then. Where's Les 5AX? There is no excuse for you now Lance, no fires, no holidays—what about a CQ DE a 2 mx signal from that tower, CQ DE 5XL. Clem 5GL very active these days, getting ready for the predicted break through on 2 mx (wide 5KU, "A.R." May, 1958). Yes, my friends, he is building a tape recorder to make sure that he can play back his next feat, to keep his interest when the bands die. Or maybe it's because Bill 5HD has that tower completed with a 6 mx, a 2 mx 4 over 4, and a 1 mx Yagi all ready and fired up for future reference.

I was rather interested in his preference for horizontal polarisation on all bands, so curiosity getting the better of me, I resorted to the "g-g" and found: Vertical polarisation preferable for local contacts, less fading, better over sea water, less troubled with ground reflections; horizontal polarisation, subject to quick fading at distances up to 100 miles due to multi-reflections from the discontinuity of the air layers up to 5 miles high, but even posing with v.p. for dodging reflections off high terrain, and h.p. has better discrimination against local man-made QRM. For long distance work, i.e. F2 layer or sporadic E, there is no preference. Makes you think! (U.K. uses v.p., whilst U.S.A., h.p.) For me, it's easier to build a horizontal array and swing it round my pole top.

Perhaps Ross 5AJ will publish his findings one day as he still seems to find time to chase 2 mx waves as well as "brain waves." Haven't heard Jack 5VJ or Wally 5DF on 6 or 2 mx yet, but since they report on my 3.5 Mc. transmissions, I must give them a mention and a word of cheer. Next month I'll be able to pass on more words of wisdom as by the time you read this, Clem 5GL will have delivered his lecture on "V.h.f. Technique," and since he has a reputation to uphold, I'm looking forward, as of writing, to his dissertation.

The South East has hibernated—maybe I was meant to pass out the news bit by bit, Col? Don't let me down boys, do something! Even 3RO when I asked him how the Q/40, etc. was going, admitted that he "wasn't doing much these days." Maybe we could do with that Technician Licence! Reg 5RR consistent on 288 Mc.

My faith has been boosted—latest flash—(5MD note). 5PS is migrating to the taxi band wagon and is migrating to 288 Mc. with the usual mod. osc. and super regen. I've hauled out the 1143A and dusted the cobwebs off it so that 3QR, 5GL, 5HD and yours truly can work him on xtal! Maybe!—5XU.

AMATEUR CALL SIGNS

FOR THE MONTH OF APRIL, 1953

ADDITIONS

- VK—** New South Wales
2QB—L. C. Pinkveitch, 30 Buchanan St., Hamilton, Newcastle.
2QR—J. J. Spence, 55 Kahlback Rd., Highfields, via Adamstown.
2ARS—R. J. Sheeman, 46 Hocking Ave., Earlwood.
2AYD—D. E. Evans, on board the M.V. "Manara." (Postal C/o Adelaide S.S. Co., Ltd., Bridge St., Sydney.)
2DY—D. V. Scott, 174 Johnson St., Maffra.
Queensland
4KE—R. H. Hildred, Weewandilla Rd., Warwick.
4SL—S. J. Henke, Kilvan.
4WT—N. J. G. Watling, Victoria Mill, C/o Colonial Sugar Refinery Co., via Ingham.
South Australia
5DO—R. H. Richards, 44 Watkin St., Fullarton Estate.
5HW—H. M. Watson, 22 Glyde St., Albert Park.
5PU—R. G. Roper, 27 Leslie St., Woodville.
5RG—H. J. Burr, 32 Elder Ter., Dunleath Gardens.
Tasmania
7UW—S. H. Pattison, 38 Mark St., Burnie.
Territories
1BA—E. A. Piebig, Macquarie Island.
1RL—R. L. Fraser, Macquarie Island.

ALTERATIONS

- VK—** New South Wales
2EY—28 Yerbenia Avenue, Bankstown.
2UG—Flat No. 2, 303 Maroubra Rd. Maroubra.
2WB—3 Eastview Avenue, North Ryde.
2ALM—Shelly Beach, Lighthouse Rd., Port Macquarie.
2AF—18 Warrington Street, Manly West.
1APB—Edgar Street, Coors Harbour.
2AQJ—30 Weir Road, Warragamba Dam.
Victoria
3DV—1 Eekford Street, Dandenong.
3JV—24 Tenynson Street, Mithget.
3OC—3 Bonville Court, Hartwell.
3OC—3 Station Road, Hume, Wilson Street, Horeham, Postal C/o. Station 3WV, Doon.
3QD—11 Leinster Street, Ormond.
3RB—Mangan Street, Bullen.
3RC—37 Laurie Street, Newport, W.18.
3VJ—24 Leinster St., Leith, Ormond.
3XZ—5 Wright Street, East Kew.
3ZU—Brook Street, Euroa.
3ABE—Micheal Street, Trairagon.
3ALZ—18 Mantel Street, Moonee Ponds.
3ARO—R.A.F. Station, Laverton.
3AXR—41 Morden Street, East Bendleigh.

Queensland

- 4GL—Yamhill Mill Camp Hill, Brisbane.
4PT—3 Speedy Street, Red Hill, Brisbane.
4KE—Acrodrome, Camowell.
4RI—Metropolitan Farmhouse, 110 Peary Street, Northgate, Brisbane, Queensland.
South Australia
5FM—4 Higgs Road, McPherson.
5RG—2 Eddy Street, Glenview.
5QF—Flying Doctor Base Station, Alice Springs.
Western Australia
6AW—330 Motor Street, Turf Hill.
6BR—33 Shenton Road, Geraldton.
6CJ—13 Mars Street, Carlisle.
6KZ—Cowaramup.
Tasmania
7AD—Clarence Street, Bellarine.

Territories

- 9FK—C/o. Department of Civil Aviation, Lae, T.N.G.

DELETIONS

- New South Wales VKs 2AKC, 2ANI, 2ASF, 2ATB, 2ATT, 2AWT now operating under VK2WT.
Victoria VKs 3FR, 3QV, 3ABT, 3AEF, 3AML, 3AOK.
South Australia VKs 5AS, 5SP, 5PQ.
Tasmania VKs 7GK, 7SK, 7XO.
Territories: VKs 1RG now operating under VK3RG, 1SW.

ERRATUM. VK-ZL CONTEST RESULT

The score of VK5CE was incorrectly shown as 182 while it should have been 399. This means that the top VK5 station is now VK5CE instead of VK5LC, which is now in second position.

DX NOTES BY VK7RK

Brief comments on three different items serve to open the record of DX doings for the month. The first concerns our newest acquisition—the 21 MHz band. After a full year of operation, it seems to me that this band developed into an almost exclusively phone band and that is not good. Don't get me wrong—I enjoy a share of phone operating almost as much as c.w. but have heard on this band many QSOs just simply die when they could have been quite successfully concluded on c.w. By all means use phone and long life to the tonkils, but don't forget the lower 150 Kc.; given activity, the DX will look for c.w. and see the country list grow.

The second one is in almost similar vein and deals with the old, old complaint. Phone in the c.w. section, but this time its 3.5 and 7 Mc. the sufferers. That 50 Kc. is narrow enough now with a few S9 signals and I'm sure that if the few offenders would just exercise a little more thought and screw the v.f.o. dial a little higher, everybody would be much happier.

The third came from overhearing a JA ionospheric prediction expert stating that the sunspot minima would occur somewhere between next September and November. Knowing that the "up slope" is far steeper than the "down slope," it seems as though after those dates we can look forward to ever improving conditions which, as you will agree, is really something.

3.5 Mc. hasn't really been getting the attention it warrants, but maybe the QRN has been just as high elsewhere as here. Eric BERS195 provides the only two calls--OK1KTW and SM8VC, both 2045z to 2115z.

7 Mc. is getting the bulk of listening by BERS195 and the calls heard this year now total 89, 83 of which were heard in April. Some of the pickings are MP4BBL, Y12AM, FA3YY, FA8JO, FA8VN, CT3AV, GD3IBQ, OA4ED, CN8BJ, UJ8AG, CR9AF. Eric also heard and sent a report to FN8AD so in time we may know for sure if the current one is still OK.

2QL couldn't leave the game alone for long of course and before bigger and better things appear is making a very well with a modest 15w. Frank lists CT1DJ*, XE2XZ, KP4CC, KP4HK, YU1AHL, DL4DT. The QRP worked all Continents except South America in one week-end. A very informative letter arrived right on the deadline from 9YU. Thanks Alan. The 7 Mc. debut was made with a 400 ft. long wire antenna and in the few breaks of QRN piled up a sizeable list of Ws plus KG5* and KW6B*.

7KK put in a couple of appearances around breakfast time, mainly looking for an FFB QSO, but quite a lot of interesting calls heard, such as YU3AKL, FK5BBD, FA8JO, Y2ZAM, ST2MF, SPKAD, M3KW, EA3JB, OK3AL, IIAW, FASIO, SL6CE, SM5AQW, FAQJ, UB5KBR, OQ2KAA, HB9CK, IT1TKK, plus, at more respectable hours, FK8AB, W, VE, KG6 and KL7. The American Novice Licensees can be heard most evenings on 7175-7200

Kc. and, considering their maximum power is 75w., put in some fine signals. Haven't as yet worked one, but suggest that if you don't get an answer to a CQ on your own frequency, try a listen in that section of 25 Kc.

14 Ma. has been very patchy. Early in the month, some good openings were observed but later it faded again. Evenings and night here have been hopeless. **3AHK** QSOed on c.w., **1IARK**, **VP9BG**, **XE2KF**, **KA0J1**, **YU3BC**, **OH5N**, **5Z5FL**, **VC4PI**, **LA4CD**, **GM2FHH**, **ZB1BU**, **VE3**, **QO1**, **HZ2FL**, **SV1SW** plus the usual W and other Europeans. **2QL** included a new one in the shape of **FQ8AP*** and others were **ZS2BC***, **VP7NS**, **VP9HH**, **HR1KS**, **9Y1** also made the 400 ft. antenna perfect this band by working **DU1DO**, **LA7AOV**, **VE3**, **SD8**, **QO1**, **VE6C1**, **VU2GM**, **VS2DH**, **LUSFG**, **DL1DX**, **G14RY**, **F8AIIH**, **ZB1BU**, **CR9AF**, **CE4EX**, **HB9AO** and many others which must make that **DX C.C.** look a whole lot closer now. Activity is confined to evenings owing to power being off all day and after 2330 local time.

RAOU been doing a lot of work with antenna- and modulation changes, but did find time to hear on phone OH2OV. KG6AEX, 11WN, YV5AB, DL4EA, V57FG, F8H8, CPlAV, VK1AF. 7RR also been playing antennae and the first QSO on the new 72FD was with ZS2BJ on phone. Other listings on phone were VK1HM, ZS6BW, KM6BE, VR3C and W6*. c.w. provided LU8EE, FK8AO*, FK8AE, FK8AL, YN1OC, and KJ6FAA*. Some excellent W signals are available long path around 2200.

21 Mc. has provided a lot of interest during the month. 2AWU sets the best rolling by making WAC in one week-end. The difficult Continent now seems to be Europe, openings being few and far apart. On C.W. Walter worked SMSCO KA9AA, CR9AH and on phone W8MCO KH9YL, HP3FL, HR19G, CP5AB, HC1RE, YV5AF, DU61V, VS8EE, TI2TGG and TI2RC, VQ4AQ, and heard VZ2CG and CE1CQ to bring the total to 43 worked.

3AHH on c.w., worked **W5** and **XE1J3** on phone **KZ5CP**, **HC1FS**, **W6NWX**, **KZ5WZ**, **HP3FL**. **VK6s** have also been active on this band as evidenced by **8FL**, who, apart from putting in a test call, was heard on the air with **W5** belt **Z57C***, **V5J1B**, **HP3FL**, **T12RC**, **QO**, **V5S***, **KZ5***, **VQ4***, **Z5*** and **Z5***—all on phone. Here, most of the time was spent listening. One that eluded on c.w. was **FU8AA** and also heard **HR1BG**, **T12RC**, **ZE2JE**, **W6AL** was audible here on the c.w. band one Sunday at **S8**, being the call **W**. Made his **K1** phone three element rotary atop a 91 ft. tower was largely responsible.

28 Me., 4XJ is now the possessor of a three element rotary 40 ft. high. Just to prove its efficiency, has worked out stations in 12 countries during the month. Many KH6s and Ws plus D7SV, W3HKE/MM at Luzon, VK9GW, XE2WE on several occasions, KX6BH, KR6CY, KA5JA, CO2KC, KZ3AE, KZ5AL, KZ5HO, HP3FL and the meagre few who got away were HP1HO, KP4TO and CO2PF. All of course were on phone.

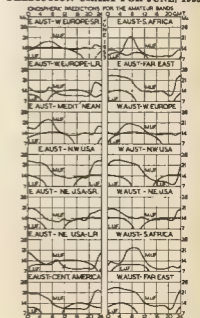
YSLA to hand are -3AHH: HSIVR,
QK1AH, P2AJJ, KGAAF, ZAOU:
L3PFF, SP2KAC, DU1TP, VSIES,
CEBAO. 2QL (for YKA operation).
HK4DP, CR7ZQ, FM7FW, VQ1RH,
FRBZZ, KC6QY, PJ5RE; brought the
4QL total to 156 confirmed. BERS195
CN2AS, FQ8AP, OK2HDV (3.5), PJ1UF
SP2KGA, Y1ZFD, ZCARS, 5A3TR,
9S4AX (7 and 14 Mc.), DL7AJ (3.5),
HA5PK, WA1GH/VQ4, Z2EJJ, HK1DZ,
HRIKS, P12AA, VR4AE, V9SWA, 9YY,
DU1CV, V58CL, LU3FG, FO8AB,
KZ5GH, F81H.

Some QTHs of interest are:—
PJ2AJ—Colony P.O., Lago Oil and
Transport Co., Aruba, Neth. Antilles.
HC1FS—Box 1, Quito, Ecuador.
VP7NS—Box 48, Nassau, Bahama Is.
YNI0C—Box 483, Managua, Nicaragua.
HP3FI—Box 76, David, Panama.
HH2FL—Box 153, Port-au-Prince, Haiti.
KM0BE—Navy 3080, Box 18, F.P.O.,
San Francisco.
MP4—C/o. MP4KAC, C/o. Kuwait Oil
Co., Ahmadi, Kuwait.

A few random jottings faster first, on doubt as to the authenticity of C3BF whose card from 9YY was returned unknown. 9YY also tells of a "Pacific Islands Monthly Net" run by the magazine of the same name at 0100z, 0700z, and 1900z. Pacific Island stations call CQ PIM for 15 minutes for QSO with island stations only and then listen for DX after that. May be a chance to snag some of the rarer ones. Alan does mention bands, but I imagine 7 Mc. The Easter Island expedition still seems somewhat hazy, but CE0AA still planted in minds. FO8AD expected to leave Rapa Is. but now will be there another year. VR6AC reported active on Pitcairn but haven't heard him.

Known active ZM stations are ZM6AA Box 23, Apia; ZM6AB C/o. Apia Radio; ZM6AC C/o. Observatory, Apia.

PREDICTION CHART FOR JUNE, 1953



* 5 Calvin Street, Launceston, Tasmania

"HAMS"!

IT HAS ARRIVED!!

"RADIO AMATEUR'S HANDBOOK"

1953 EDITION

Published by American Radio Relay League

Price **44/3** and **2/-** Postage

Once again this amazing volume contains the most up to the minute information for all radio enthusiasts

DON'T DELAY — ORDER TODAY

from—

McGILL'S AUTHORISED NEWSAGENCY

183-185 ELIZABETH STREET, MELBOURNE, C.I., VICTORIA.

"The Post Office is opposite"

Phone: M 1475-7

**GOOD NEWS
FOR HAMS!!**

**ELECTRONIC
A. & R.
EQUIPMENT**

**QUALITY TRANSFORMERS
AND CHOKES**

NOW SOLD DIRECT FROM FACTORY TO YOU!

★ **SHOWROOM AND SALES** On St. Kilda Road—just across from the Shrine of Remembrance—the new A. & R. showroom and sales department is at the service of Hams! Just five minutes' tram ride from the heart of the city. And no parking worries for motorists! **CALL IN AND BUY YOUR TRANSFORMERS DIRECT!** Trading hours: 9 a.m. to 5.15 p.m. week days, and 9 a.m. to 12 noon Saturdays.

★ **MAIL ORDER SERVICE** A. & R.'s mail order service is geared to give fast and reliable service to Country and Interstate Hams. Equipment carefully packed and sent to any part of the Commonwealth.

POWER AND FILAMENT TRANSFORMERS

Include electric-static shield. Designed for 50 c.p.s. operation.

Type and Mounting No.	Primary Volts	Secondary Volts per side C.T.	D.C. Ma.	Filament Windings	Amateur Price
1371—8	200, 220, 230, 240	500, 600, 750, 850, 1,000	300	—	150/-
1460—19	200, 220, 230, 240	565, 500, 425	250	2 x 6.3v.—3a.; 2 x 2.5v.—3a.; 5v.—3a.	110/-
1525—21	200, 230, 240	—	—	2.5v.—10a. (1,000v. insul.)	47/6
1305—22	200, 220, 230, 240	—	—	2.5v.—10a. (3,000v. insul.)	75/-

FILTER CHOKES—SWINGING CHOKES MARKED *

Type and Mounting No.	Inductance—Henries	Current Ma.	Approx. D.C. Resistance Ohms	Maximum D.C. Working Voltage	Amateur Price
	Maximum	At Full Rated D.C.			
1011—1A	30	15	250	1,000	59/6
*983—1A	25	20/5	30/300	1,000	83/6
986—1A	15	10	300	1,000	62/6

★ **PRICES** SALES TAX TO BE ADDED TO ABOVE PRICES.

★ **NOTE** The above selection from the A. & R. standard range is available ex stock. Also Modulation and Driver Transformers.

Call, Write or Telephone direct to—

A. & R. ELECTRONIC EQUIPMENT CO. PTY. LTD.

Head Office, Factory and Sales: 373 ST. KILDA ROAD, MELBOURNE

Telegrams: "ARLEC," Melbourne.

★ YOU CAN RELY ON A. & R. ★

Telephones: MX 1150, MX 1150

Bring Your Regulations Handbook Up To Date

AMENDMENTS TO 28th FEBRUARY, 1953

In all places where mentioned, delete "Chief Inspector (Wireless)" and insert "Assistant Director-General (Wireless)."

Page 3, para. 2: Delete the definition of "duplex operation." Insert the following: "Third party" means another person besides the two principals (one of whom is at the transmitter and one at the receiver)."

"Broadcasting station programmes" means programmes broadcast by stations operating on the medium frequency broadcast band, i.e. 535 Kc. to 1805 Kc., but, in remote areas where, because of unsatisfactory medium wave reception, it is usual for listeners to rely on programmes originating from high frequency broadcasting stations situated within the Commonwealth or its Territories, such programmes are also to be included in this definition."

Page 4, para. 15: Delete. Insert: "An application to install and operate an Amateur station at a Department of Navy, Army, Air or Supply establishment, depot, camp, etc., may not be considered unless the approval, in writing, of the Department concerned has previously been obtained. In the case of the Departments of Navy, Army and Supply, such approval may not be recognised unless issued by the Central Administrations, Melbourne. Authority in this connection has been delegated by the Department of Air to Area Headquarters in the States concerned. The question of the operation of an Amateur Station on Department of Civil Aviation property is a matter between the Regional Director concerned of that Department and the applicant."

Page 6, para. 29: Third line, amend to read: "Their use for instructional purposes is confined to . . ."

Para. 32: Amend to read: "An Amateur Station Licensee may transmit in English and receive in any recognised language, plain language messages . . . etc."

Para. 33: Fourth line after "direct or indirect," insert: "or any matter of a commercial character."

At end of paragraph, insert: "The relevant regulation under the Wireless Telegraphy Act 1905-1936 concerning this matter reads as follows: '56(3). The Licensee of an Amateur Station shall not, except in the case of an emergency and with the consent in writing of an authorised officer, undertake the transmission or reception of messages for third parties.'"

Para. 36: Third line after "emanating from other Amateur Stations," insert: "irrespective of the frequency of the originating transmission."

Insert new paragraph: "36A. Subject to certain conditions, permits to record and re-play transmissions from other Amateur Stations operating in the Amateur frequency bands below 50 Mc. are issued to the licensees of Amateur Stations by the Superintendent, Wireless Branch, in the various States."

Insert new paragraph: "36B. The licensee of any Amateur Station may, in the Amateur frequency bands of 50 Mc. and upwards, record and re-transmit transmissions from other Amateur Stations operating in these bands. The equipment so employed must be capable of producing recordings of high quality. Re-transmissions made at the request of an individual station are to be limited to a period not exceeding five minutes in the aggregate in any one day."

Page 7, para. 42: Fourth line, after "licence or special permission" add: "In this connection, due regard must be paid to the provisions as indicated in paragraph 15."

Para. 43: Delete following portion: "In certain cases . . . three months." Insert in lieu thereof: "In certain cases, temporary permits to operate portable or mobile stations within any of the authorised Amateur frequency bands below 50 Mc. may be granted for a period normally not exceeding three months in any one current year of the licence."

Para. 50: Delete. Insert: "An Amateur Station Licence may be granted to a radio officer, or other qualified person, to operate an Amateur Station on board an Australian ship on which he is employed, if the approval of the Master of the vessel is obtained. Such a licence confers the right to operate the station at all times except while the vessel is anchored in any harbour, or moored to any wharf or pier belonging to another Administration. Permission to operate the station while so located must be obtained from the Administration concerned."

Para. 53: Delete. Insert: "Any person who has been licensed by a foreign Administration to install and operate an Amateur Station on board a ship, yacht, etc., shall not operate his station while the vessel is anchored in any harbour or moored to any wharf or pier in Australia or its Territories without the approval, in writing, of the Assistant Director-General (Wireless)."

Page 11, para. 68: After the word "Persons" add: "Electrical wiring associated with Amateur installations must comply with the safety standards demanded by the Electrical Supply Authority concerned. In addition, licensees must take all other reasonable precautions considered expedient for the particular installation."

Para. 69: Delete "168" in the last line and substitute "144".

Page 12, para. 95: Add: "While single components such as valves, transformers, etc., capable of handling power in excess of that authorised shall be permitted for use in Amateur Stations; unless prior permission has been obtained from the Superintendent, Wireless Branch, no combination of such components may be so used."

Para. 98: Delete all figures and substitute the following:—

*184—	1.86 Mc.	+288—	296 Mc.
3.5 —	3.8 "	1578—	685 "
7 —	7.15 "	1215—	1,300 "
114 —	14.35 "	2,300—	2,450 "
121 —	21.45 "	5,850—	5,850 "
26.96—	27.23 "	10,000—	10,500 "
28 —	30 "	21,000—	22,000 "
50 —	54 "	30,000—	Mc. and
144 —	148 "	Above.	

* Available for emergency network purposes only. † Normal Amateur activities are not permitted in this band.

† Temporary allocations.

Para. 102: After "Pulse" emissions add: "N.F.M.—Narrow band frequency modulation telephony. Transmissions to be confined within plus or minus 3 Kc. of the quiescent carrier frequency."

"Type A3a waves. S.S.S.C.—Single sideband reduced carrier telephony."

Page 13, para. 105: Amend to read: "The types of emission at present available for use by Amateur Station Licensees, and the frequency bands to which their use is restricted, are as follows:—

A1 (keyed c.w.), A3 (speech), A3a (single sideband reduced carrier), and N.F.M. (narrow band ± 3 Kc.)

—All authorised frequency bands. F.M.—All authorised frequency bands above 26.96 Mc.

A2 (m.c.w. only)—All authorised frequency bands above 50 Mc.

A0 (c.w.) and Pulse (unmodulated)—All authorised frequency bands above 144 Mc.

A1 (keyed c.w.) and A3 (speech)—1,840 to 1,860 Kc. (Emergency purposes)."

Insert new paragraph: "105A. Where pulse transmission is employed, the length of each pulse and the nature of the emitted wave-shape shall be such as to restrict the radiated sidebands within the limits of the Amateur frequency band in which the transmission is taking place."

Para. 110: In second and last lines delete "166"; substitute "144".

Para. 114, para. 111: Delete the words "and 'duplex'" from both the heading and the second lines of this paragraph. Delete also the words "In the case of duplex operation" from the fourth line and the word "However" from the fifth line.

Page 15, para. 131: (e) delete "(except 0 or 1)".

Page 16, para. 129: Delete "166"; substitute "144". Add new paragraph: "132A. Provided that portable and/or mobile stations which are using telegraphy indicate their location (including the State) at the end of the initial call and immediately before conclusion of a session, as required by paragraph 132, the suffix '/3', '/2', etc. (to indicate the State from which operation is taking place), may be added to the station call signs for intervening calls and the word 'portable' or 'mobile' may be omitted therefrom."

Page 25: Appendix 3, in third line, delete the word "Assistant" and amend address to read "340 Collins Street, Melbourne, C.I."

Page 27: Delete "Duplex Operation" and "131".

Para. 28: Under "Mobile Amateur Stations" add further paragraph "132A".

Para. 29: Under "Portable Amateur Stations" add further paragraph "132A". Under "Pulse transmissions" add further paragraph "105A". Under "Recordings" add further paragraph "36A, 36B".



FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

Fed President G. Glover, VK3AG.
Fed Secretary G. M. Hull, VK3ZS, Box 2611W, G.P.O., Melbourne.
QSL Bureau, J. R. Jones, VK3RJ, 23 Landale Street, Box 181, E. E. Vic.
DX C.A. Manager, G. L. Morris, 50 Eighth Street Parkdale, Vic.

NEW SOUTH WALES

President: John Moyle, VK2JU
Secretary: David H. Duff, VK2KO, Box 1734, G.P.O., Sydney.
Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor: Harry Powell, VK2AYP, 8 Russell Avenue, Wahroonga.
QSL Bureau, J. B. Corbin, VK2YC, 78 Maloney St., Eastlawn, Sydney (Inwards and Outwards).
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHN, Ryan Ave, West Kempsey, Newcastle; Ron McIl Stuart, VK2ASL, 88 Dandenong St., Stockton; Carmichael and Lakes: Harry Hawkins, VK2YL, 27 Comfort Ave, Cessnock; Western: W. H. Sutt, VK2JWH, Cumberland, Forbess, South Coast and Southern: Roy Rayner VK2DQ, 43 Pettit St., Yass, Eastern Suburbs: Don Knock, VK2NO, 48 Yanko Ave, Waverley, Northern Suburbs: Harry Powell, VK2JP, Russell Ave, Wahroonga, St. George's: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

FEDERAL

HAM CONTACTS

From "Radio and Television News," February, 1953, comes an interesting little par on F.C.C. warnings to American Amateurs. It says:—
"The F.C.C. has recently warned that American amateurs are forbidden, in accordance with international agreement, to contact foreign stations whose Governments prohibit their citizens from transmitting outside their country. Governments currently making this prohibition are Austria, Cambodia, Indonesia, Laos, Viet Nam, Laos and Thailand.
"U.S. Hams are also required to comply, when working VK (Australian) DX, with an Australian regulation restricting Aussie Hams to sending and receiving call stations outside data and remarks of a purely personal nature.
"The Commission stresses that this list is not to be confused with one published last Spring in countries which permit outside contacts but forbid their Hams to handle international third-party traffic."

SUCCESSFUL CANDIDATES FOR A.O.C.P.

The following is a list of candidates who were successful at the examinations for the Amateur Operator's Certificate of Proficiency held on 15th January, 1953, and 14th April, 1953:—
New South Wales
Examination held 15/1/53—
Seymour, N. C., 14 Wyndham St., Mafrs.
Pierce, E. C., 30 Buchanan St., Hamilton, Newcastle
Furner, L. K., R.M.E. 616, Coolamon
C. C. M., 30 Station St., Goulburn
Spurke, L. J., 58 Kahibah Rd., Highlands, via Adamstown, 2N
Glockner, E. W., 58 Belmoba Ave., Lakemba
Riley, M. R., 6 Barings Rd., Mordialtie Heights
Roche, R. M., 32 Mount St., North Sydney
Examination held 14/4/53—
Fennell, D. L., 83 Railway St., Wyong.

Victoria

Examination held 15/1/53—
Scott, V. M., 14 Johnson St., Mafrs.
Buckney, E. J., Whittington P.O., Geelong
Batrick, J. B., C/o Mrs. T. Cook, Commercial Rd., Tarzan
Zimmer, W. M., 58 Skeus St., New Town, Geelong
Examination held 14/4/53—
C. G. M., 11 Newton St., Warrnambool
Townlay, N. H., 12 Harry St., Maidstone, W.S.
Russell, Clarke, M. N., 127 Manningham St., Parkville.

Queensland

Examination held 15/1/53—
Hildred, R. H., Wyndham Rd., Warwick
Hicks, S. J., Kilbirnie
Mciver, J. G., 21 Hurd Ter., Mornington, Brisbane
Examination held 14/4/53—
Campbell, G. V., Australian Hotel, 19 Albert St., Cairns.

VICTORIA

President: G. Dennis, VK3PY.
Secretary: C. Gibson, VK3FO.
Administrative Secretary: Mrs. G. Pickering, Law Court Chambers, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
Divisional Sub-Editor: K. E. Pincoff, VK3AFJ, 14 Dunscombe Ave., Ashburton, S.E.11.
QSL Bureau, Inwards—Graham Roper, VK3ZS, 26 Lucas St., South Caulfield, Vic. Outwards—Frank O'Dwyer, VK3AF, 190 Thomas St., Hampton, S.E. Vic.
Zone Correspondents: Western: T. B. Rodda, VK3ATR, Box 254, Warracknabeal South Western: W. Wines, 11 Bedford St., Warrnambool, and E. Giddings 8 Nelson St., Warrnambool North Eastern: A. D. Buchanan, VK3FD, "Boonoomall", Warringah, Far North Western: M. Folie, VK3GZ, 101 Lemon Ave., Mildura, Eastern: Leo Dwyer, VK3SG, and John Batrick: North Western: C. Case, VK3ACE, Cumming Ave., Birchlip.

QUEENSLAND

President: J. A. Weddell, VK3AT
Secretary: V. P. Green, VK3VB, Box 638J, G.P.O., Brisbane.
Meeting Night: First Friday in each month at the Royal Geographical Society Rooms, Ann Street, City.
Divisional Sub-Editor: J. T. Hope, VK3OL, Royal Parade, St. John's Park, Ashgrove.
QSL Bureau, Inwards—VK3AFJ, Brisbane St., Brisbane, South Brisbane (Inwards and Outwards).

South Australia

Examination held 15/1/53—
New: L. K. E., 17 St. Broadview,
Gehardt, R. M., P.O. Box 16, Mount Bryan
Richards, R. H., 44 Watlie St., Fullarton Estate
Macdonald, D. E., 4 High St., Kensington
Examination held 14/4/53—
Porter, J. B., 137 Anzac Highway, Grassmere
Campbell, D. B., 8 Wotton St., Cheltenham
Daw, E. C., East Terrace, Glenelg

Western Australia

Examination held 15/1/53—
Gates, B. H., Lot 50, Wakefield Cres., Albany.
Examination held 14/4/53—
Wood, J. R., Kellerberrin.
Leaver, E., The Homestead, Byford.

Tasmania

Examination held 15/1/53—
Mulligan, P. D., C/o T.N.T. Private Bag, Kelo
Dunne, P. L., 41 Foote Rd., West Hobart.
Examination held 14/4/53—
No candidate was successful.

A.O.C.P. AT SIXTEEN:

Negotiations extending over two or three years have concluded satisfactorily between the Postmaster-General's Department and the W.I.A. with approval being given for the issuance of the A.O.C.P. at sixteen years of age instead of eighteen years as at present.
Such approval will not materially change the W.I.A. membership nor shall the list of licensed Amateurs in the Commonwealth be greatly swelled because the age limit has been lowered; but it will provide for the licensing of the few new recruits who will be conditional on reaching the A.O.C.P. standard or better at an earlier age than average.
Due to an amendment being required to the Regulations under the W.I.A. Act, the other Departmental work being involved in this change, some few weeks will probably elapse before the new provision will be introduced.

NEW SOUTH WALES

The April meeting of the N.S.W. Division was held at Science House on Friday, the 24th, with the President and John Moyle, in the chair. This was to have been the Annual General Meeting, but owing to a slight formality required by the new Articles, not having been completed at the Annual Meeting has therefore been postponed until May. The remarks in the last issue in regard to the incoming Council should therefore be advanced one month.
As seems inevitable at a meeting which is to consider constitutional amendments, the attendance was poor, only a few more than 50 members and visitors being present. A report of the Convention was given by the Federal Council, Mr. Johnston, and observed that there were Wilson. Those who were frightened away by the agenda items seemed a rather interesting

SOUTH AUSTRALIA

President: W. W. Parsons, VK3PS
Secretary: R. G. Harris, VK3RS, Box 123HK, G.P.O., Adelaide
Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide
Divisional Sub-Editor: W. W. Parsons, VK3PS, 19 Victoria Avenue, Rose Park
QSL Bureau: Geo Luxton, VK3RS, 8 Brook St., 150 Milham South Aus Inwards and Outwards

WESTERN AUSTRALIA

President: J. A. Moss, VK3GM
Secretary: J. Mead, VK3LJ, Box N102, G.P.O., Perth.
Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
Meeting Night: Third Tuesday of the month.
Divisional Sub-Editor: W. E. Coxon, VK3AG, QSL Bureau: Jim Rumble, VK3RU, Box F219, Perth, West. Aus. Inwards and Outwards.

TASMANIA

President: L. E. Edwards, VK3LE
Secretary: F. J. Evans, VK3TF, Box 371D, G.P.O., Hobart.
Meeting Night: First Thursday of each month at the Photographic Society's Rooms, 163 Liverpool Street, Hobart.
Divisional Sub-Editor: L. E. Edwards, VK3LE, 48 St. Johns St., Hobart.
QSL Bureau: Inwards—T. Allen, VK3TA, 31 Thirl St., New Town, Gulliver's, Calvert, VK3RT, 318 Park St., New Town, Tas.
Zone Correspondents: Northern: M. A. Chaplin, Divisional Secretary, in which several of Western: K. K. Wilson, 11 Cunningham St., Burnie, Tasmania.

experiment. The items were quickly ratified with a couple of slight qualifications and then a lecture on r.f. chokes, prepared and recorded on microgroove discs by John Moyle, was played. As a contrast, the President then played a tape recording of an actual meeting of the North Division in which several of those involved in the production of "Amateur Radio" told their story.

The suggestion is that the recording of lectures should be made available to all Branches and Country Groups. There is no fundamental reason why they should not be distributed between the Divisions if lectures of interest can be recorded.

Useful criticisms and suggestions were received from those present and it was generally agreed that it was a most useful and helpful assist in the successful organisation of the Country Groups which is now being attempted on a nationwide basis through the microgroove record was the most promising method.

Among the several notable visitors present was 4DO from Rockhampton, whom the speaker used to work fairly regularly back in the middle twenties!

SOUTH WESTERN ZONE

Stewart 2PV, at Griffith, is on the air again with a new tx and putting out a very good signal on 40 m. The gang might subscribe to a xtal insert in place of the carbon mike. Stewart is now in the second week of his 1APZ, at Leeton, off the band with the "Bu wog", but pleased to hear you back again now that you are back on the air. Stewart is on trip to VK3. Geoff 2BQ and Ross 2PN, at Tumut, are converter building for 144 Mc. and are also looking for a good holiday on that band.
Alf 2BW, at Wagga, active mainly week-ends on 80 m, has plans for a beam on 144 Mc. about 50 ft high. We now have a new Ham at Coolamon, Lyn Furrier, 402, at Yerrabool also received the A.O.C.P. waiting on call sign at the moment. Congrats Lyn, hope to work you soon. John 1APZ, at Deniliquin, active on 80 m with 1.5 and 100 ft beam. He has the young boys for a long while. What's doing at the Capital shops?
Peter 2APF, at Montague, has had a sad loss. His father having passed on. The sympathies of the zone are extended to you and your family. Peter, 2APF, at Montague, also heard on 80 m. Don 2JL, at Yerrabool also active on 40 and 80 m. 2AJO at Coolamon, has at last heard 2WTH at Forbes on 144 Mc. and is now up at Coolamon.

HUNTER BRANCH

The April meeting of the Hunter Branch was held at Mullumbidgee in the BHR Auditorium to hear a lecture on "Two Way Communications on V.H.F." presented by Mr. Page, of Pyle Radio. The lecture was well attended and the contacts between a base station in the lecture room and a mobile tx touring round Maitland.

Thirty-eight members were present and the demonstration and lecture caused keen interest. The Urunga Convention organised by the North Coast Branch of the W.I.A. was well attended by Hunter Branch representatives there being twenty in the Hunter Branch contingent. The list of prizes won at the "Do" is impressive, comprising two firsts, one second and two thirds, which shows that the boys were well in the fore in the various contests. In the first 144 Mc hunt, Harold 2AIA was second and Shorty 2KX was third. In the second 144 Mc hunt, Three Bill 2AEV was first and Ken 2KG came third.

The Urunga Scramble was the crowning glory for the Hunter Branch. This was a joint effort with Harold 2AIA and Les 2AOR (then an Associate) as chief tree climber and antenna erectors, Associate Syd Daniels as log-keeper, Bill 2AEV as transport provider and chief recruiter for Ron 2ASJ, John 2TU, Dave 2EG, Cec 2KR and Johnny 2GA as moral support, and Ron 2ASJ, the "Ham with the golden voice" on the mike. Ron won the Scramble with a score of 40 contacts in one hour and also won the miles per watt prize by working 2Ls on 5 watts.

Other Hunter Branch members at Urunga were Alan 2UY and Varley 2SF in charge of the hidden Tx, Bruce 2SG and off-sider Bill Nicol, Ken 2KG and son Athol, Bill 2XT, a family and Merv 2AAM who piloted a plane up from Newcastle and stayed over night.

Harold 2AIA and family continued on up the coast and has been working portable VK4 from Southport and Toowoomba. Dave 2BZ is erecting a 4 over 4 over 4 beam for 144 Mc. Bert 2CN is now a Daddy. Use him as a second op. Bert George 2AGD has acquired a new car, but still has time for QSOs on 40 mc. Joe 2ANT dabbling with tape recording. ZWV on phone soon, also constructing new aerial tuning unit. Keith 2KG waiting transfer of antenna masts for new shack. Les 2AOR offers assistance? Hops he's on for the VK-IL Contest. Two new Hams came on the air in April to swell the ranks of the Hunter Branch. They are Les 2QB and Les 2AOR.

Active in the Technical College Radio Club are Max 2OT, Les 2QB, Les 2AOR and Associate Brian 2ST. Frank Stobbs and Rodger 2PAC claim Mac O'Brien still has ex-disposal gear for anyone to look over. Associate Norm Stanley practicing C.W. and expected to sit for the A.C.P.F. exam in the near future.

VICTORIA

The May meeting of the Victorian Division was held on 6/5/53, approximately 100 being present. Two very interesting films were shown. At the end of the meeting there was a very little time was left for general business.

The President welcomed G5YD to the meeting. In the G5YD presentation he hoped to take out a VK call sign.

Our hard working Secretary has been given three months leave of absence, as pressure of business prevents him giving the attention to his honorary duties he would wish. In the meantime, Col 3FO has stepped into the breach. How do these things find the time?

We are now operating under the Uniform Constitution, consequently two extra Councillors are required. R. Bredshaw and S. Dixon have been appointed.

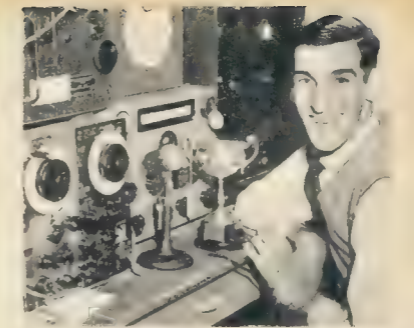
GRL Carle. In future VK3 cards for International are forwarded to the Registrar. This service is for VK3 members only, and will cover cards for New Guinea, Papua, Norfolk Island and Cocos Island as well as cards for Antarctic Expeditions.

New Members. The following Associate Members were admitted to the W.I.A. at the last meeting G. Hiderbrand, P. S. McKenna, N. W. Rogers. Welcome fellows, may it not be long before you are full members.

The monthly meeting of the Victorian Division brought forth a few less starters than usual, possibly because some of the usual participants did not bring their Mothers' Day. The tx had been hidden in the back of the Bentleigh Football Ground. First to arrive was Don 3ALQ, whose time was 35 minutes, followed by Don 3ALQ, Peter 3ALQ, Bill 3ALQ, Hill and Merrie Grimwood in that order. The first six arrived within 45 minutes.

Two of the tx and a vehicle equipped with highly technical and secret devices arrived. This was thought to be an invader from space until the invader was identified as Les 2AOR, and the cheering multitude welcomed the first public showing of the "Three London Norway" D/F system. Les was so sure it was ultimate that he set up the tx and the tx was on the Sunday morning, left the installation of the tx to the 2nd op, and claims that road tests have been made. The tx was found to be better let Phyl, take control of proceedings.

All joking aside, I think that the time is ripe for the tx and the tx is a good one to cover future hunts. I suggest all starters to be honour bound not to exceed speed limits



Pictured above is Ron Stuart (VK2ASJ) and his home equipment. Also shown is the Cup he won in the Urunga Scramble at Easter. Ron made 40 contacts in an hour—really good going. (Courtesy of "Newcastle Morning Herald.")

and automatic disqualification of anyone whose average speed is higher than 25 m.p.h. taken over the shortest practicable route. Further, operator-drivers to stop when taking bearings, teams to be permitted to take bearings while in motion. Operator-drivers could have an allowance, say one minute per mile deducted from their actual time, the corrected time to be used to ascertain final placings. Possibly this view will raise a controversy, but better that than for the "gendarmes" to sit in wait for anybody whose car is fitted with a loop. Had the doubtful pleasure of meeting that fugitive from a Pulitzer Prize—the VK3 artist. After studying him from all angles, decided to do without the 75A. Guess I'll have to settle for an 5X2A.

It is dignified for a Past President to be seen in public wearing kilts? 3AFF gone off a few life, real nourishing enough for a square dancer 3BH experimenting with mobile gear, going north I believe. 3SX re-building. 3AUP abandoned radio in favour of square dancing. 3ARV telescope building—very good for a hunting Ron 3AZK about to do a little in the Queen's Service. 3AHH very happy with results on 21 Mc. 3TX has built new shack, but can't get in, 3YL claimed it for a store-room. The offer to help with the poles still stands. Bill 3AHH very happy with results. Congrats to you and 3YL Noel. Don't forget, Noel, "DX before Disasters!" (How's that Mr. Parsons?)

Finally, don't forget the next Tx Hunt is on the 7th June, same arrangements as usual. Listen to 3WI on the Sunday morning in case inclement weather necessitates change in plans.

CENTRAL WESTERN ZONE

Main item of interest this month for the zone was the get-together at Warracknabeal on 23th April, 2 p.m. Sunday showed 3AKW (Lubeck), 3AFO (Horsman), 3ID (Dimbolds), 3VN (Vauks) and 3ATW (Warracknabeal) present with earloads of VLA, 3YLA, and Junior ops. Quite a representation of the zone and I think a record for the zone for mobile gear. Bill arrived with a new "bomb" with the boot full of gear. Better wait for a while Bill before you start drilling holes in the dash to fit it up front. Merv also had more of the station in the back seat and going well. Charlie had a very neat set-up which really beefed out a signal.

Highlight of the day was the hidden Tx hunt with Byron's box of tricks. With threatening weather the gang set off in directions of the compass and after the passing of about 30 minutes, 3AFO and 3ATW converged on a loca-

tion down at the back of the high school. Both drove straight past it and commenced a search on foot about a hundred yards further on. The comment of two girls fishing in a nearby hole, "There's something fishy going on here" aptly summed up the situation. However, after a cross bearings, both ops within fifty yards of one another, were abandoned for the final search. A final D/F by 3ATW neatly intersected a line of rushes in the bed of the Yarrambling Creek where on investigation the monstrosity was found to be nestling.

Later, with weather still threatening, the gang decided to adjourn to 3ATW's farm. But also, a dark and stormy night, a wrong turning and 3ATW gone on ahead, and soon a lonely voice in the night calling and signing 3IB mobile and lost. However, a quiet heart to heart chat on 40 mc soon put that right and the evening eventually went off quite well with the gang departing about 2200 hours for their respective QTAs. To change the subject, it has been mooted that some hook-ups be held at 1900 hours instead of 1930 hours on Wednesday nights now winter is here, so to all you irregular attenders, if you don't hear us, try an hour earlier in case change has passed the vote.

NORTH EASTERN ZONE

Just lately it has been our pleasure to extend a hearty welcome to some new members in the zone, namely 3CO at Seymour, Frank 3ZU in Eurus, and Gordon 3XU at Wangaratta. Thanks are due to Doug 3JP who made a comprehensive survey of everybody and their activity before going away on six weeks' leave for your truly who was away for a fortnight.

Rugh 3AHF is apparently bowling along quietly while Ken 3KR and Keith 3JC are on to the DX with Syd 3CL breaking on to 30 mc Europeans with a Laury II. In the new equipment class are Alan 3JP with a low-powered tx to cover 30 to 8 mc complete with v.f.o. and key input, Rex 3TR with a portable tx and rx under construction, and Jack 3FF modifying his portable gear. Howard 3YV is concentrating on receiving, and Reg 3JKA and Jim 3JK is going on holidays to VK2.

Col 3WQ is doing a good job in encouraging some enthusiasts at Cobram to a participation in the privileges while Stan 3AEP is home building. Neil heard of Les 3ALE, Peter 3ATF, Murray 3BZ, Tom 3TS and 3GL, but Henry 3TH has been heard running the Emergency Net hook-ups around this way from time to time. It is regretted that last month's notes, written by a volunteer while 3FD was away in Ballarat, went astray in the mail and hence did not appear.



REMEMBER These Specials from Our STOCKTAKING SALE

- | | | | |
|-------------------------------------|----------|---|------------------|
| ★ 18" x 24" Plywood Speaker Baffles | 15/- | ★ Amphenol 5-pin, 6-pin, 7-pin Sockets | 6d. each |
| ★ 18" x 24" Fibro Speaker Baffles | 10/- | ★ General purpose 1½" x ¾" Tubing, available in 3 ft. lengths | 1/6 length |
| ★ Q+ Coils | 5/- | ★ Twin Twisted V.I.R. 3/020 Cable | 4d. yard |
| ★ Nally Radio Knobs | 7d. each | ★ Rubber Covered Hook-up 40/0076, 8/- 100 yards | |
| ★ Relays S104, S103 | £1 | ★ Olympic Rubber Cotton Push Back 10/010 Wire | £2 per 100 yards |
| ★ Rola "C" Line Transformers | 10/- | ★ Two-pin Polarised Flat Pin Plugs | 5d. each |
| ★ Floating Coil Magnets | 5/- | ★ Metal Cabinets for Combination Amplifier and Pick-up | £10 |
| ★ P.M.G. C123 Lever Switches | £1 | | |
| ★ Mercury Tilt 60-Second Switches | 12/6 | | |
| ★ Mercury Tilt 120-Second Switches | £3 | | |

STEANE'S SOUND SYSTEMS PTY. LTD.

60-80 Miller Street, Melbourne, C.1

Phones: FJ 9149, 9140, 4543

RECORDING and REPRODUCING NEEDLES

RECORDING SAPPHIRES. "Setco" Cutting Styli manufactured by skilled Craftsmen are of finest gem structure ground to exact specifications and polished to the very finest degree of smoothness and brilliancy. Hardness is beyond human test or knowledge. Correct radius ensures "Setco" Sapphire Styli to cut silent shiny grooves for many hours. They are specially designed to ensure a proper thread throw. Quality and uniformity is guaranteed and they can be re-sharpened a number of times. Available in either Standard or Microgroove Types. Price is £2/8/- each, posted.

REPRODUCING NEEDLES. "Radiotone" Red-Shank Playback Needles are the finest manufactured, ensuring high fidelity, wide range reproduction and low record wear. Each needle is individually shadowgraphed and inspected under a Microscope to ensure that its point is perfectly spherical and can be used with the utmost confidence on Acetate, Vinylite Transcriptions, or ordinary Gramophone Records. Price 7/6 per 100, posted.

Successful Recording and Reproduction is dependent upon the use of the correct Sapphire Cutting Styli and Reproducing Needle. "Setco" Styli and "Radiotone" Red-Shank Playback Needles, described above, are the happy combination and ensure best results.

Obtainable from:—

S. E. TATHAM & CO. PTY. LTD.

178 COLLINS STREET, MELBOURNE

rather hard due to the fact that I have just purchased a new home in Townsville and moved the family up there from Brisbane and thus have been mighty busy with things other than Ham Radio.

The most consistent Northerner heard on the band in early 4MY, he has been doing quite a deal of c.w. on 14 Mc. and has also acquired 4ME's beam, the latter having been transferred south. Have heard Harry rag-chewing with old cabbagers at Macquarie Island, and otherwise burning up the ether 4WH, after being flooded out in the recent rainy season, has now got going on 14 Mc. and seems to be getting out well as usual. Heard old Ted 4EJ going to town with the Europeans a few weeks back, but not heard him lately. Also heard a very nice Townsville-ite Edgar 4GF rag-chewing over the town on 14 Mc., still putting a mighty sign out with his 15 watt phone. Another local, 4DE, has also gone South to take a course of instruction in the R.A.A.F. You wouldn't believe it boys, his instructor is none other than Frankie Hine, ex-4QL, who is now back in VKX. Had a QSO with Frank lately on 14 Mc. and he says his noise level is awful, wondering whether to renovate his house or sell it and buy another. I wonder why?

Often meet Wally 4RU of Stuart, and he tells me he has a yearning to try 144 Mc. as he has visibility from his place of toil and 4GN here and wants to try a link with me. Says also that he has a fully hand-switched to ready to go at anytime. Wally is also trying to get the interest of the Townsville gang together and it sounds like a good idea to the writer and for my part I will do my part in any way possible.

As for my activities out here at Cleveford, when it is possible for me to be on the air I find conditions quite fair, although poor in comparison with the old days however. 7 and 14 Mc. produce a W.A.C. almost anytime I am on, that is on c.w., whilst 21 Mc. has produced a W.A.C. on phm but for that elusive South American, although it is easy to work Central America, such as TI, KZ, HF, etc. 38 Mc. has produced occasional W contacts on phone and one night two or three Europeans were worked on phone.

I would once more like to remind the Northern lads, including VKX, PLEASE let me know what you are doing so as I can keep this column going, send in anything you have been doing, even if it seems of no value to you. It is to the other chaps, so what about it chaps.

SOUTH AUSTRALIA

As Joint President and Chairman of the VKX and VKS Divisions, "All right Barber, at down, I can prove it." As I said before I was rudely interrupted, as Joint President and Chairman of the VKX and VKS Divisions, it gives me much pleasure to resume writing the VKX notes from where I left off in March, just before the white ants got in! The monthly general meeting for April was held in the clubhouse to a capacity gathering, in fact it was overflowing, and when one realises that it was an annual general meeting with its consequent reports, balance sheets, etc., then it is all the more remarkable. Of course the nasty minded few suggest that it was because the President was away in Melbourne acting as President to that Division, "Sit down Barber! I can prove it!" But, of course, no decent minded person would even entertain that thought for a moment. I thank you, I thank you.

The details of the meeting are copied from the minute book by kind permission of Hal SAW and for all I know may be a pack of naughty naughties, but I am stuck with it and there you are! Gordon SXU occupied the chair and read the President's report, Jim SFD read the Treasurer's report, and everybody said nice things about everybody else, including the President, and a good time was had by all, I think! I was sorry that I was not there to hear the nice things that Les SPN and Mr. Goldsmith said about me.

Associate member Les Paltridge, who is a member of the Coronation schoolboys tour, and at the time of reading this, right in the thick of things over there, thanked members present for their gift at the last meeting and promised to give them all details of the Coronation on his return from England. A suggestion was made that cricket match be played between the phone boys and the brass-pouters, and also one between the Members and the Associates, and then with no further business to attend to, the Acting Chairman stepped down from the lofty heights and acted as projectionist for the excellent selection of films that were screened.

Our welcome visitor, Cliff 4CG brought along a film of the Great Barrier Reef and it was a knockout. To prove his veracity he then gave a very interesting and instructive lecture on single sideband working which laid every-

body in the aisles. Jokes aside, he did a speeded job, he illustrated his points on the blackboard, and all, and all showed that not only did he have a thorough grasp of his subject, but was able to impart it to his listeners with a dry, humorous manner, that had the audience in the palm of his hand right from the start.

The meeting ended after 11 p.m., probably one of the latest on record and probably one of the best. Nice work fellows. Among the welcome visitors were Cliff 4CG, Harry SPN, and Messrs A. Sadowy, N. Hilbig, T. Dayman, H. Cogan, L. Russell, H. Phillips and one or two others who were a little eng. I believe that the Port Adelaide Fire Brigade arranged that no fires would occur whilst Harry SPN was at the meeting. Nice of them wasn't it?

UPPER MURRAY AREA

SMA has commenced rack mounting his gear, at least he has the gear on the floor and the rack is partly made. It is expected that the gear will climb up into place in the rack one day whilst Fred is away—he hopes! ARE cannot find time to do more than put in a Sunday morning appearance on account of labor difficulties concerned with getting his crop off. Is the "Flanagan and Allan" act still on, Hobbs? SKW has confounded all the critics, including me, by proving himself to be the most experimental experimenter that ever experimented experimentally. For further details of this back-room boy (Harry to you), see details of the Upper Murray meeting night.

SCB has had very little to discuss lately, but Huggle did evince more than a passing interest in "How to reach 144 Mc. in two tubes," as put into his hand by SMA. This article is an overseas publication, and makes it look too easy. SCB has been working early and late on account of the fruit harvest. Murray is not a grower, but comes into the picture when the crop is delivered to the place where he is on the salary train. At the moment, radio is playing second place to a growing daughter.

STL started on a tx. alleged for 144 Mc. but accidentally smashed an RMK. Tom's command of the appropriate language was "Rattling Salvation" sag at the handlebars, but SKW came to the rescue with another tube, but the tx is still not on 144 Mc. No doubt it will get there in good time, but progress gets off the beaten track sometimes when



No matter what Radio Components you require, get them from Gerard & Goodman's, where you will find enthusiasm for Radio matched only by helpful and good service.

The assistant who serves you at Gerard & Goodman knows his Radio. He knows just what you want—and because of "G. & G.'s" more complete stocks, he can supply it. Advice? Certainly! He will give it readily, expertly—because he is trained to do so. The staff at Gerard & Goodman are specialists who give a better, more complete service because of it! See "G. & G." first—always!

For Everything in Radio—

GERARD & GOODMAN LTD.

192-196 RUNDLE ST., ADELAIDE

Phone: W 1541

It contacts Tom. By the way, Tom, that W.I.A. kix, that you left for me to deliver to Reg SRR went first to Ron SFL because the Joker that took it from you thought you said that it was to be sent to me. Would you like to see evidence. For the purpose of record, the following were present, SBC, SKW, SCF, SRE, STL and SMA, and some time was spent in discussion of the matter. The work was then completed by SKW. Harry had made a 6 mX xial controlled converter and a multi-tube converter. He was also working on a 144 Mc. tx. The work completed was a credit to Harry and quite disposed of the ugly rumors and accusations regarding Ron's alleged work and had lost interest in radio." SRE suggested that Harry had the right idea and as he appeared to be in a pleasant time he might like to do a little of the work of the club. The look of alarm that appeared on the face of Harry save the fellows a rough idea of what they could expect from him in that direction.

My correspondent did not make any mention as to whether they did full justice to the goodies at the end of the meeting, but from my personal observation, one or two of them would have been in the City. I should say that Mrs. SMA was lucky to get the tablecloth in intact state. My correspondent also pointed out the fact that the Port Pirie gang have secured some newspaper publicity upon their forming radio society, a feat to which I do not to lay any claim to being responsible, and goes on to say that the Upper Murray gang have been holding meetings for the past year and feed pure BS and disinformation has changed hands in that time, to say nothing of the improved friendship between the boys which has resulted from the meetings. To this I heartily agree, and would like to add that as yet I have received no details of the Port Pirie gang in a position to comment on their good work. I believe that Doc SMD has received a letter from the Rev. Vuthberlet ROD giving details of the new venture, but I never speak to Doc if I can help it. I suppose I will have to turn my collar back to front and await results! After all said and done, the boys must stand together. DX y' say? That's what happens to you when you take a trip to VK3, sharp as a razor, that's me!

I have always in my natural modesty known that as a President and Executive Officer, I shall we say, "hot stuff," but just how hot I never realised until I arrived in Melbourne recently. Not wishing to bore you with a long story, I will give you the facts and let you judge for yourselves. The day I arrived in VK3 the Administrative Secretary (Doc Hurley) of the VK3 Division resigned and then the Divisional Council meeting, Russell SCF resigned, and then all the office-bearers. Realising that a strong man was needed to helm the meeting then asked me to take the chair and call for a new Chairman. In my usual resolute and stern manner I did so and restored order out of chaos. Now I ask you, am I over suspicious or am I over-suspicious? Why this wholesale resigning because I am in VK3? Why did the Council all vacate their office? What's that? It is the usual thing at the end of each year. Well, we have, well, some new modern idea I suppose. I will have to join the VK3 Council about this, I wouldn't like to think that I was outstaying my welcome in VK3, what am I saying?

In the Federal notes of last month's magazine, the writer goes on to describe the Federal Administrative Council, "in addition to the members, etc.", the following notoriety were present. Tut, tut, what will he call me if he says so?

The 1953 VK3 Council office holders remained unaltered except for the position of Custodian of the Instruments, which is now held by Doc SMD. This position vacant on account of Frank SDW being transferred to VK6 and therefore being unable to handle the instruments any longer. The letters are sorry to see Frank SDW always done his bit for VK3, both on the Council and off, and our loss will be VK6's gain. But at least Frank, and don't forget to keep the VK5 filter in the rx.

I attended a magazine committee meeting whilst in VK3, and was a bit of a surprise with what I saw. The members of the Committee all knew their jobs, and an air of efficiency is evident all the time. From my observations I have come to the conclusion that I have been sending the parcels of butter, potatoes, etc. to the wrong joker, and in future shall not even think of it in a different direction, etc. you reading this Mr. Higginbotham, Sir? Incidentally, at this meeting, sitting at the end of the committee facing me, was a character obviously suffering from flatulence or windy spasms, judging by the sneering look on his face, who never took his eyes off me all night I enquired as to who he was from Tom SFL on our way home, and was horrified

to be told that it was the VK3 scribbler, the one who has been so nasty to me in the VK3 notes. I went back to the meeting place the next day on the lookout for him, prepared to suggest that he was a member of the club, but found out that he had left just after me. Probably got the windup when he saw how muscular and well built I was. He was lucky, for two things I would have taken out of him at him!

SOUTH EAST AREAS

Associate member Ron Scott has been ending out quite a lot about dice and tape recording the hard way, that is to say he has bought a dice and tape recorder and pays for his mistakes. The man who makes mistakes must learn. Ron, is usually the most experienced in the long run. Brother, am I experienced! STW is still trying various arrangements to make his 3 mX gear with various different results. I don't know what that sounds like to you Tom, but to me it looks like the old one about the dog chasing its own tale, or should it be tail? GCH is on the move again, this time to a new home, so this time I should say he will stay longer in the VK3. Claude, wouldn't it be cheaper to pay the rent than to be coughing up to the carrier all the time? You should, that one up to me.

Associate member Don PHT is busily engaged in converting a ZBRx with the idea of listening to the 1 mX sections. What's ZBRx? Well er, er, it is, er, excuse me a second will you fellows, my wife has some dishes which need to be wiped, and there isn't any DX about, I'll be back never fear.

SMS has the 60 ft. tower finished and painted and all that is required now is some new bearings and the bearings and the Stuart will be propagating in the propagable direction. Pardon me if I am getting a bit technical, but I have been to VK3. The walls of the shack look like SKU are almost completely covered on 30 mX c.w. quite a bit, although he has no new countries to report this month. I am not to believe that a big re-building programme has been the cause of no news of the gliding, but both gliders are well under way and the 1953 spring should see your man's fancy truly to—no not "liv"—but gliding. Congratulations on your effort in the VK-ZL Contest OM.

Associate member Jack Fowler has been turning out formidable numbers of converted FS8s for a nearby fire fighting unit, in fact his assembly line looks like G.M.H., almost anyway. All present will stand in attention as a reverent salute to the announcement that SMA is still "dishes before DX." John my heart beats for you, in fact I shed a tear, and if it were not for the diabolical nature of the world would make a sign of pity. SFD has only two contacts for the month to report, and there is some suggestion of it being a bad month. Oh no, not you too John, come what may, I must rally my henchmen in this time of crisis. If I am any worse, dear, it was only one of the old cuss. Blimey!

SCJ, despite the accusations of Pro SPS (SMD), has not been to the "Big Smoke" for quite some time and will not be visiting there for several months, possibly October. Apart from skeks and a few additional contacts on 40 mX, Colin SCJ has been very busy. In fact, there is the biggest misnomer of all time. Pro SPS, if ever there was an Anti SPS, he has been a sign of a sign. I have had a letter from the proprietors of Luns Park alleging libel against the sign. Pro SPS, see you!

Most of us here in VK3 are at a loss to understand why there should be any discussion among delegates as to the advisability of putting into print the names of the various advisory members of the Advisory Committee. Here in VK3 the members of the Committee realise that they are acting as buffers between the Ham and the Department, and are there to do a good job for the Ham while at the same time playing the game by the Department. After all, the VK3 Amateur Committee is for the formation of the Committee, and did not force it on us, and it should be considered an honour to be selected for the Committee. The members of the Committee are not hangers-on, informers, or servants of the Department, but are there to keep the grand old game of Amateur Radio on its present high plane, so why not print the names?

The news that the Department has sanctioned the Technician license has caused a flood of enquiries as to the conditions, standards required, etc. from people who have been in all walks of life. It would appear that this license will be the means of increasing the membership of the W.I.A. beyond even the numbers envisaged by the most enthusiastic organizer. Don't forget therefore, should you receive any such enquiries, to point out to the Technician license was not granted to us just because the Department likes the look of us, but because the W.I.A. has up to such a battle for it that it was to convince the Department of the need for

the license. In this case the W.I.A. means Federal Executive, and it is to those shrewd gentlemen that a good deal of the credit must go.

Talking of F.E., reminds me that I also attended a meeting of that august body, whilst I was in VK3, and whilst I am not going to say anything about the members conspiring the executive, I am going to say that I had an entirely wrong impression of F.E. both as to its operation and also its functions. My visit to the meeting was an eye-opening experience, I can only say that F.E. has recruited a staunch and loyal supporter in myself to its ranks. In fact, I might as well go the whole hog, in abasement, I sincerely support the purchase of the filing cabinet. No kidding!

Anybody reading these notes would wonder if I was a VK3 or a VK3. I am a VK3 President of the VK3 and VK3 Divisions. I am a VK3. This is where I came in.

[The honourable President wishes me to refute the rumour that while in Melbourne he was seen in the front row at the "Follies." He also wishes me to definitely deny the fact that he borrowed the super-power glasses used by the "race-caster" at the B.B.S.S. Does that get you out of a hole Warwick?—Editor.]

Low Drift Crystals

FOR

AMATEUR BANDS

ACCURACY 0.02% OF
STATED FREQUENCY

3.5 Mc. and 7 Mc.

Unmounted £2 0 0
Mounted £2 10 0

12.5 and 14 Mc. Fundamental
Crystals, "Low Drift,"
Mounted only, £5.

Spot Frequency Crystals
Prices on Application.

Regrinds £1 0 0

THESE PRICES DO NOT
INCLUDE SALES TAX.

MAXWELL WOODEN

15 CLAREMONT CRES.,
CANTERBURY, E7,
VICTORIA

Homecrafts

★ RADIO ★ BARGAINS

BARGAIN De Luxe RECORD CHANGER

Swiss made Pallard Record Changer, outstandingly reliable Changers, 7", 10" or 12" records, with High Fidelity Crystal Pick-up.



As Illustrated, complete £8/19/6

MODEL 150 PICK-UP



World famous Goldring Model 150 Pick-up. Brand new with two sapphires for standard or microgroove recordings. Reduced from £7/16/8 to 49/6. Limited quantity.

★ RADIOGRAM CABINETS

Beautiful Piano Finish Cabinet with shallow well for Standard Player or deep well for Record Changer.

Price— 16 GNS.
as illustrated.

SCOPE 6-SECOND SOLDERING IRONS



Ready for use in six seconds. Operates from 6 volt mains. Price, as illustrated, 50/- Transformers for mains operation, 47/11.

★ METER BARGAINS

- English Moving Coil 2-inch scale 200 ohms per volt. Two models, 0-20 volt or 0-40 volt. Ideal for home lighting plants, only 14/11. Cost of re-scaling to any amperage from 0-5 Ma. to 0-5 Amps, or voltage to 1,000 volts, 18/6.
- 0-1 Ma. 2 inch Scale, 27/11. • Thermo Ammeters, complete with thermo couple, 0-2.5 Amp. or 0-3 Amp., only 8/11.



BARGAIN ELECTRIC GRAMO UNIT

English Dual Speed Electric Gramo Motor (33 $\frac{1}{3}$ and 78 r.p.m.) and Goldring 150 3-way Pick-up for standard or microgroove recordings complete in smart leatherette carrying case.

Only— £11/19/6

DISPOSAL TUBE BARGAIN



Acorn Tubes type 954 and 955 as illustrated. Brand new cut to only 7/11. Also type 7C7, 7/6.

COUNTRY AND INTERSTATE CLIENTS PLEASE ADD FREIGHT OR POSTAGE



KARSET KIT

Car Radio Kit, as described in "Radio and Hobbies," March, 1952, issue. Karset complete to the last nut and bolt, including 6 inch Rola Speaker and Box. Price including sales tax—

22 GNS.

STOP PRESS BARGAINS

Check This List Carefully

- ★ Amplifier Cabinets, complete with Chassis 39/6
- ★ Five Valve Steel Chassis 1/-
- ★ 6K7G Valve, direct replacement for 6U7G 7/11
- ★ 12 volt 500 watt Generator. Originally cost £50, cut to only £4/19/6
- ★ Midget or Standard Iron-Cored I.F. Transformers 7/11
- ★ 14 Henry 60 Ma. Choke 5/11
- ★ Imported Dual Speed Unit, 3 $\frac{1}{3}$ or 78 r.p.m. with High Fidelity Crystal Pick-up for microgroove or standard records. Cut to only £8/19/6
- ★ Type 913 1 inch Cathode Ray Tubes. Brand new, only 39/6 each
- ★ 5 inch Speaker Boxes, only 9/11
- ★ Bradley 10,000 ohm midget Potentiometer 1/6
- ★ Midget Reaction Condensers 3/11
- ★ 30 Henry at 100 Ma. Power Chokes 12/11
- ★ 12 volt Vibrators 9/11
- ★ Eddystone Flexible Condenser Couplings. Only 1/11
- ★ Technico F18 Crystal Pick-up with Sapphire Needle 39/6
- ★ 0.1 Megohm Yaxley Potentiometer. Only 1/6
- ★ Half Megohm Potentiometers with D.P. Switch 6/11
- ★ Mica Condenser Bargains: 0.0001, 0.00015, 0.0003, 0.0004, 0.0005, 3/9 doz. 0.001, 0.002, 0.003, 0.0034, 0.004, 0.005, 0.006, 0.008, 6/- doz. 0.01 Mica Condensers, 1/3 each.
- ★ Brand new 8 uF. 525 volt Electrolytic Condensers, cut to only 2/6 each
- ★ 0.5 uF. 200 volt Tubular Condensers, 11d. each or 9/- doz.
- ★ 0.1 uF. 500 volt Block Condensers, only 2/11
- ★ Type CD17 Cord Drive Dials. Priced at only 7/11
- ★ Octal Wafer Sockets 6d. each
- ★ 5BP1 Cathode Ray Tube Sockets, only 5/11 each

290 LONSDALE STREET, MELBOURNE

Central 4311

from Italy..



..home of fine engineering of every type..

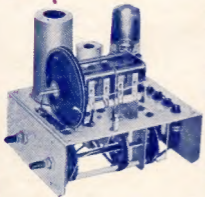
we proudly bring you

RADIO COMPONENTS BY SOCIETA PER AZIONI GELOSO

Consistent with our policy of providing the Australian market with the highest quality and most economical range of components available, chosen from the world's sources, we now present some of the products of Italy's leading component manufacturers—*Societa Per Azioni Geloso*, of Milan.

The workmanship of Italian cars and many other products is recognised as being thorough and complete. The same technique has been applied to "Geloso" radio accessories and we proudly offer microphones, crystal inserts and V.F.O. units to discerning Amateurs and Experimenters, through normal Distributor channels, at very low prices.

Each component is fully guaranteed against defective workmanship and faulty material.



STUDY THESE OFFERS:

Transmitter V.F.O. Unit:

Type M4/101: A very stable five-band three-tube V.F.O. unit, fully wired and tested.

Bands: 3.5–4, 7–7.45, 14–14.4, 21–21.6, 28–29.8 Megacycles.

Dial: Fully calibrated and band spread over 180 degrees.

Tubes: 6J5 oscillator, 6AU6 isolator, 6V6 output (not supplied).

Output: Tuned on each band, giving at least 3.5 Ma. grid current to a single 807 on all bands.

Power Supplies (not supplied with unit): 400 volts at 25–54 Ma.

Price (including Sales Tax):

£10/4/9

Crystal Microphones:

Type M/100 Piezoelectric Microphone: A very attractive chrome plated "ball" type microphone of small physical size, complete with three yards of twin shielded low loss cable. Thoroughly shielded.

List Price: £5/19/11

Type T/20: Hand Microphone in well proportioned brown bakelite case. Unit stands on table without need for any stand.

Uses UN10 fully screened insert. Complete with 4 ft. of twin screened low loss cable.

List Price: £3/12/-

Crystal Inserts

Type M400: Frequency response 40–7,000 cycles. Extremely robust and mechanically strong. Can withstand falls and knocks. No further casting is required as unit is complete as a microphone of attractive appearance.

List Price: 32/11

Type M410: Same unit as M400, but with extra screening to exclude R.F. pick up.

List Price: 38/6



Crystal Insert:

Type UN10: A complete crystal insert for incorporation in a cage in the manufacture of complete microphones. Used in microphones employed with Geloso wire recorders.

List Price: 30/7,

Full information from the Sole Australian Factory Representatives:

R.H.CUNNINGHAM PTY. LTD.

118 WATTLETREE ROAD, ARMADALE, S.E.3. CABLE "CUNNIG" MELBOURNE—TELEPHONE UY6274